

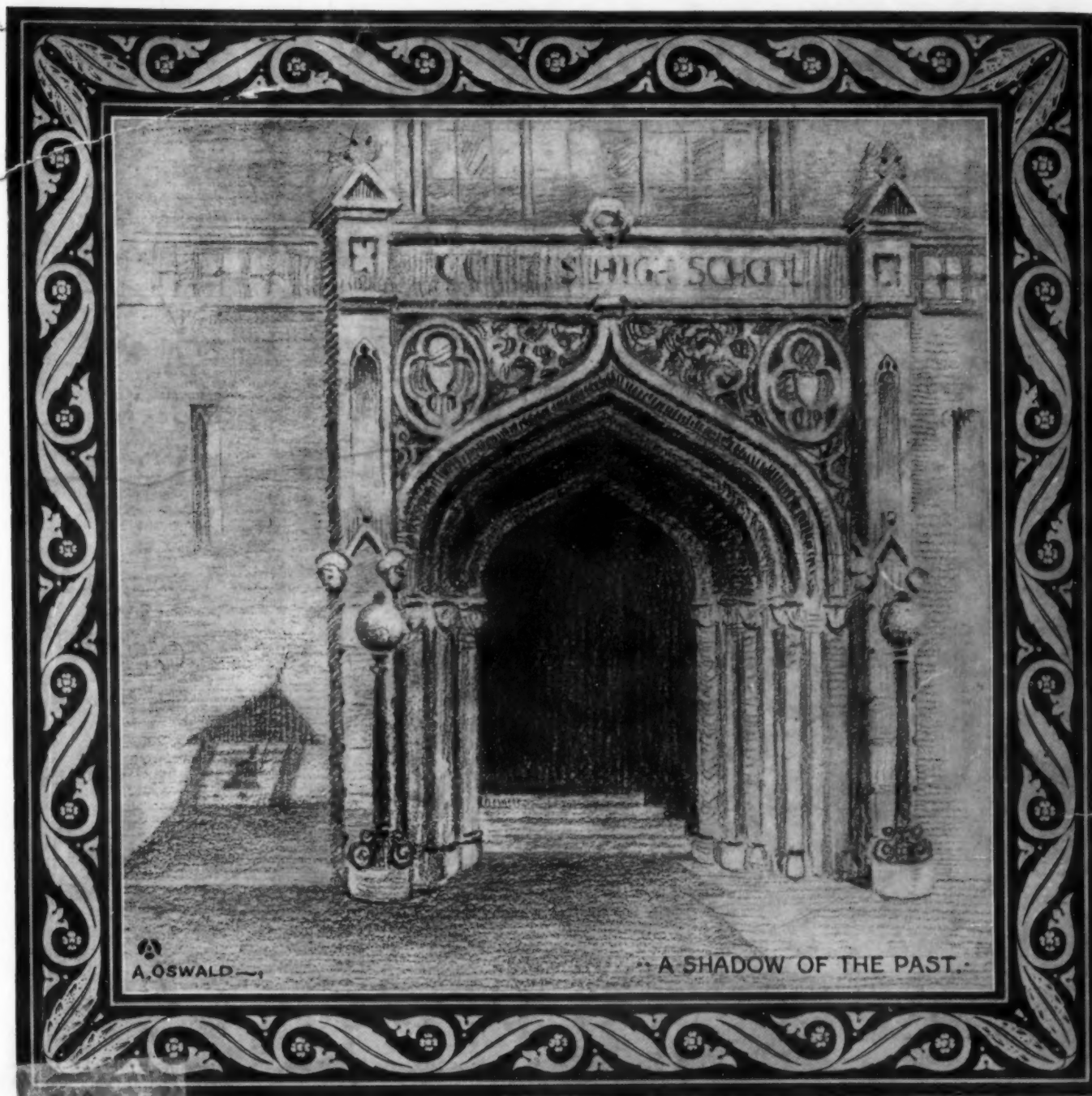
THE AMERICAN School Board Journal

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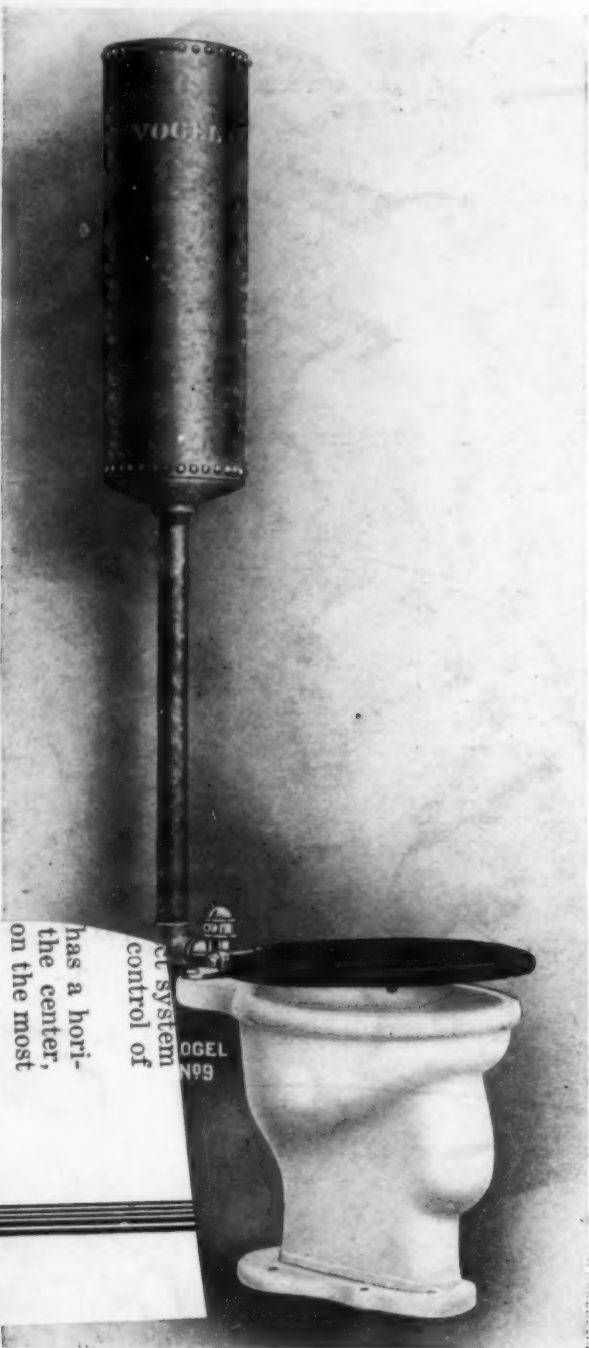
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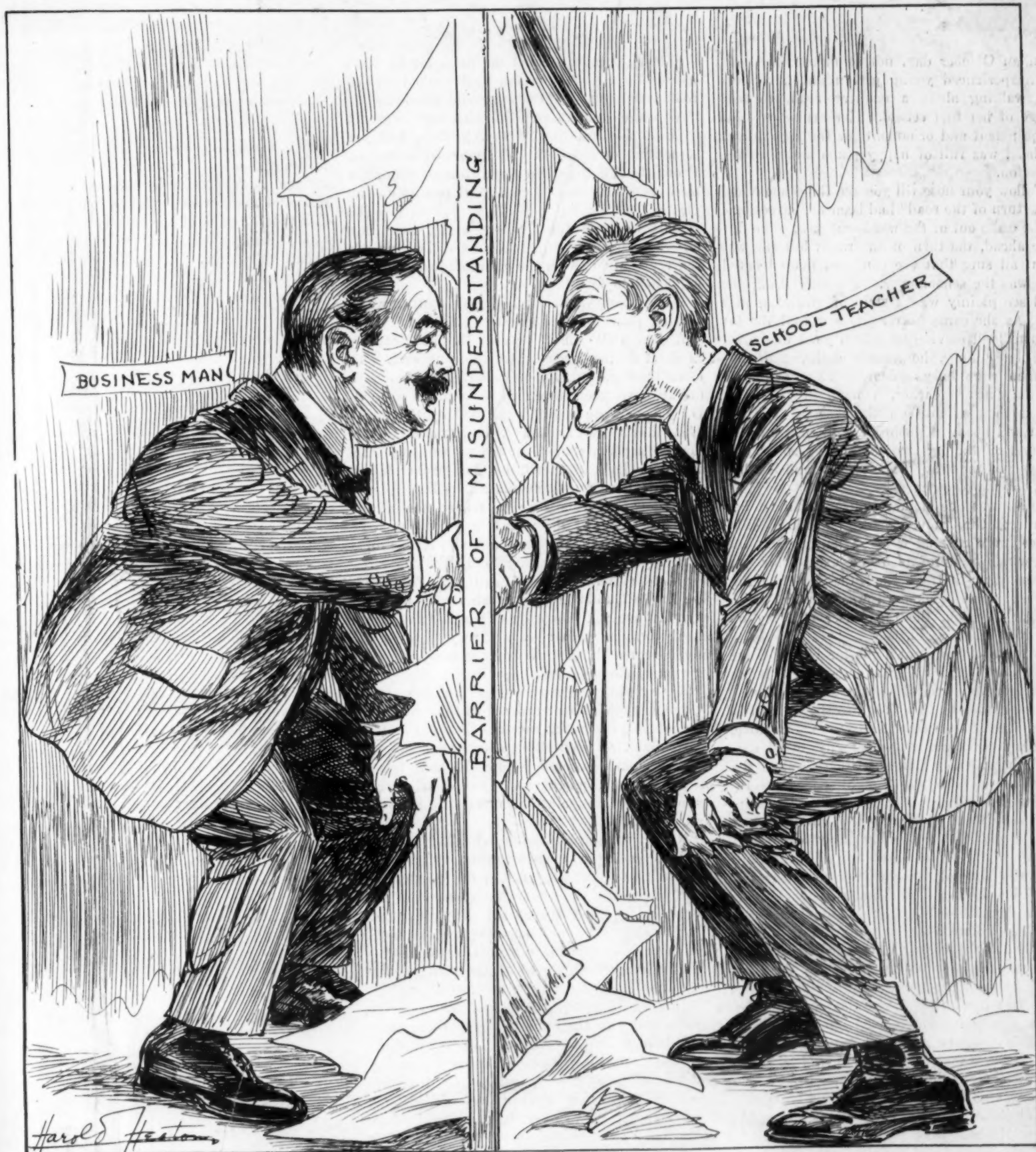
THE AMERICAN School Board Journal

Founded March 1891, by WILLIAM GEORGE BRUCE

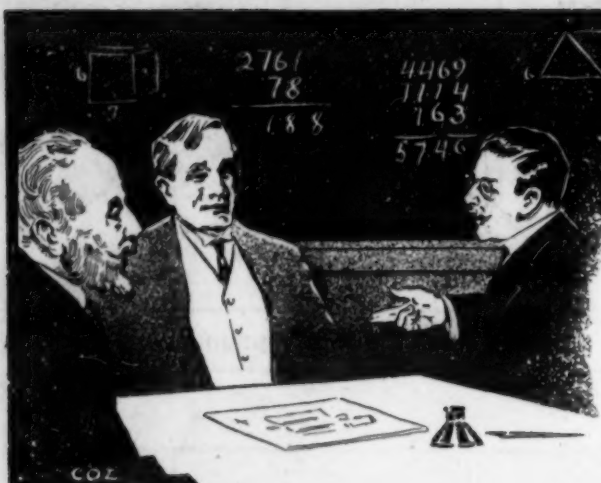
Volume LXIV, Number 5

MAY, 1922

Subscription, \$3.00 the Year



Each to the other: "Well, well! There's more to you than I thought there was!"



Are You "Ready for Action"?

A Superintendent's Wife

On an October day, not so many years ago, an inexperienced young girl might have been seen walking along a country road, to take charge of her first school. Her arms were full of equipment and ornament for the schoolroom, her head was full of happy plans and glad anticipation.

"Follow your nose till you see the schoolhouse at the turn of the road" had been her directions. As she came out of the woods she saw, some distance ahead, the turn of the road; but she was not at all sure that the confused mass located there was the schoolhouse. The only thing she could see plainly was a strip of gleaming new roof. As she came nearer she saw that the bit of waste land serving as school yard was filled with big, clumsy, homemade desks, and that workmen were busy indoors. They evidently saw the "new" teacher, from afar for they stopped their repairs on the plaster, took up broom and hoe, and pushed the rubbish out the door and off the log that served as step. Then they carried the heavy desks inside; and left her alone, to sink or swim.

The air was one cloud of dust, which set her coughing; the stove, desks, window sills, benches, were covered with broken plaster; the eight windows were unshaded except for the glaze of dirt that softened the garish light. The very small blackboard was smudged with last year's crayon, the rag eraser still lay on the nearest window sill.

The spots of wet brown plaster helped make the air damp and chilly (her youthful hopes and enthusiasm had also been slightly dampened and chilled by this time), so she decided to build a fire. Last year's dirt was on the stove, last year's ashes were inside, many years' soot choked the chimney. By the time she had the ashes removed she was coughing again. By the time she had that fire going she was nearly suffocated, and every window nailed down!

One of the dreams for her little school had been that the place should always be cheerful, with pretty things in sight, to make their appeal to the children. She had expected to adjust the shades evenly (before she had seen the place), put a stanza of "October's Bright Blue Weather" on the board, and as many pictures on the wall as time would permit.—By the time she had finished the most urgent of the cleaning, washed her cut and bruised hands in the brook and wiped them on the dust cloth, she had barely time to stick the bunch of black-eyed-Susans through a knot-hole in her home made desk, before she called school.

There was no basin, no towel, no pail, crayon, eraser, clock, or even door-key for her use. A very few of these were promised "next week;" the majority she herself supplied gradually, out of a salary of \$33 a month. I am not drawing on my imagination. I am writing a page of the actual experiences of an actual teacher, in one of the richest states east of the Mississippi.

When the men vacated the room for her that morning they went outside and worked on the roof, where they kept sawing and pounding all day, while just underneath she was expected to hold the attention of the children, and get something into or out of, their little brains. Promptly at four, when she dismissed class, the men came indoors and continued repairs on the plaster.

This went on for a whole week, then they left the place to her, left all the rubbish, including the shingles from the old roof, just where it happened to fall.

Where were her bright hopes and forward looking plans by this time?

Although the school year in this district was as short as the law allowed, the first week was more than wasted, for the sake of repairs that might have been attended to months before. Do you suppose that, at the end of the term, when that board of trustees, the community, the county superintendent, came to sum up the merit, or lack of merit, of the teacher, they said "But we must remember that last fall we didn't have things ready; we robbed her of the best two weeks of the year," to say nothing of the courage and ambition which was choked out of her by the heartbreaking conditions?

Short-sighted we say; negligent, criminal? We had a Sunday school teacher who used to say "Let me ask you a question that you need answer only to yourselves". Are you guilty of any of these things? Is your school building in repair, cleaned, made inviting and encouraging for the new teacher? Have your textbooks and supplies been ordered so that they will be *on hand*, ready for use, the first day? Has the furnace, or stove, been overhauled and the necessary parts ordered, before the need is upon you? Are conditions in your district such as to *help*, or *hinder* a thorough-going start the first day?

"Nothing succeeds like success." So much depends on the way an enterprise starts out. I heard a schoolman say to an untried teacher, "The first day is the most decisive one you will ever spend in the schoolroom; the first month will mark you for success or failure." Yet success is often made almost impossible because of handicaps over which the young teacher has absolutely no control.

A town with fourteen teachers elected a new superintendent. He went to his position some weeks before school opened, got a working knowledge of the situation, secured supplies and conditions necessary, and had his tentative schedule thoroughly worked out. When the teachers came they knew just where to take hold, and how. That first day at ten o'clock the fourteen rooms were in full swing. A trustee, coming around in the afternoon, was amazed, and said they had gained at least three days over previous years. They had gained much more than three days. That first morn-

ing gave them a running start, avoided the friction that comes with confusion, and set the standard for the entire year's work.

We hear much bitter complaint about the school taxes, and the amount of money spent for equipment, not only in the one-room cabin in the backwoods, but in the central high school of many a rich city. Is it right to invest this vast amount of money and then, for lack of timely thought, or a few extra dollars, prevent a part of the plant from operating at all, or from operating in full measure? Would a business man do this? Would he secure a desirable office, a highly paid stenographer, a standard typewriter, then refuse to "spend another cent" for a typewriter ribbon? Or tell her to do as best she can until next week? Or let her buy it herself, even though her salary is ten times \$33 a month?

Would any sane man build and equip a garage, buy a fine car, and then hold up matters for months because he always neglected to get gasoline? Perhaps it would often be wiser to put less money into our garages, and more into gasoline.

Are these comparisons ridiculous? Let us look about us. Let us look pretty close to home. This very winter, in a large school plant in my home county, a teacher whose subject makes desks almost an absolute necessity, is teaching in a room that was formerly used for something else, and is furnished with benches only. Every time she gets her courage up to inquire she is told to have a little patience, the desks have been ordered. But they never come. If, next June, her pupils fall below grade, will one of the people responsible have the courage, and the patience to say "But we handicapped her terribly."

In a town that willingly votes the money for all necessary supplies, a teacher asked, and asked, and asked, for a set of maps that were a vital part of her equipment. Her work was held up, her pupils began to lose interest, until at last she bought the maps out of her own purse. By accident one of the trustees learned of it, soundly berated the entire board, including himself, and ordered the teacher to be reimbursed.

During the late summer I received a letter from a bright, cheerful teacher who is not given to grumbling. She wrote in part: Our schools open next week. We are making a number of changes this year, and I am to have a room (for the eighth grade) that was used for primary children last year. Although this change was decided on last April, none of the desks have been moved, and the furniture for my room hasn't been ordered. I see where all our work will be dreadfully handicapped for about a month, and made so much harder than necessary."

(Concluded on Page 32)

Superintendent and School Board Member*

Lena Hoffman Kraus, Member, Board of Education, Ann Arbor, Michigan.

The kinds of relationships that exist between people depends largely upon character, training, ability, and occupation. These qualifications are never exactly the same in any two people and no one person can ever duplicate his relationships to any single individual. Because some superintendents are excellent and some are poor, and some board members are desirable and others are undesirable, it follows that the relationships between these people will be most varied and complex. But those classed as excellent are not always 100 percent excellent and sometimes we can even find it possible to say a good word for those in the undesirable class.

This may be partly illustrated by the story told of Hans Schmidt who was reputed to be the meanest man in the neighborhood. He died. His body was placed in the grave and according to an old Pennsylvania-German custom the people stood around the open grave waiting for someone to say some good thing about the deceased before filling the grave. After a long wait, Gustave Schultze said: "Well, I can say just one good thing about Hans; he wasn't always as mean as he was sometimes."

This can also be said of some people who are not dead, and if we substitute the word 'good' for 'mean' and say, "he is not always as 'good' as he is 'sometimes', we are only saying that people are not always consistent in their actions. Before attempting to discuss the relationships of these two very important and outstanding officials of our modern school system, the superintendent and the school board member, it may be interesting and profitable to review briefly the early development of our public schools.

As we know them today, these schools are the outgrowth of very small and simple beginnings, and have been changed from year to year, have been modified and expanded. School authorities have experimented with courses of study, methods of teaching, and policies until we have our present modern school system, which, in the larger cities, with its superintendent assisted by a score or more of specialists in various lines, and carefully trained and selected supervisors and teachers, with well balanced courses of study, modern texts, and hundreds of thousands of children all housed in well equipped buildings, is a far different picture from the first schools—crude and unequipped, comfortless and unsanitary, taught by untrained but not necessarily unskilled teachers.

Schools in Colonial Days.

In the colonial period the settlers of New England did more to encourage education than did the planters in the South. Characteristic of educational development in many countries, these early schools in America were at first under either private or religious control. Then, eventually, came the real public schools maintained by the community for children of all classes and conditions. These very early public schools were established, maintained, and directly controlled by families or communities desiring to educate their children and willing to pay the necessary taxes. Thus in 1639, in Newbury, Massachusetts, the people voted to one Anthony Somerby "four acres of upland" and "six acres of salt marsh" as an "encouragement to keep schools for one year." But other groups of families or com-

munities not so minded could refuse and neglect to educate their children believing that they were simply asserting their rights of parenthood.

As long as the schools were in the early stages of development, the people of the community were, as a whole, in direct control of their schools. They met periodically at "town meetings" and arranged for the running of the school in all of its details. Gradually, however, as the country grew and school problems increased "committees" were appointed to take care of some special need or emergency, or were sometimes given general supervision of the schools and were appointed for a definite period. Such supervision included visitation, inspection, and grading of schools; appointment of teachers, and the formulation of rules and regulations. Usually the ministers or other learned men of the community were selected to serve on these committees. Here are observed the first steps taken toward specialization in school control.

As towns and cities increased in size, these "school committees," as they were called, grew larger and larger in the attempt of the people to secure equal representation. Efficiency was further hampered when the members of the committee or board divided themselves into numerous sub-committees in order to attempt to adequately supervise and direct all the school activities, with the result that they very often found themselves entangled in problems for which they had no training or experience.

After more or less of this clumsy method of trying to supervise schools, some communities and boards began to realize that the business of managing schools could not be done efficiently by a more or less (often less) intelligent group of citizens whose ideas and ideals and general conceptions of school matters were of a mixed variety, and that what was needed was some one person in the system to take charge of affairs, or in other words, that they needed a "head."

Thus, the office of superintendent was the direct outgrowth of the almost desperate needs of the board. While the superintendent, as an individual, sometimes did come from the teaching ranks, where he was more or less of a leader, the office itself was created by the school board and did not have its conception in the teaching profession. Although some of the first city school superintendents were called from the teaching ranks, more often an executive officer of the school board was appointed.

First Superintendent of Schools.

Eighty-five years ago, in 1837, the first superintendent was appointed in Buffalo, New York. As late as 1870 there were only twenty-seven city superintendents in the entire United States and they represented only thirteen of the states. Some of these early superintendents were not even school men, their duties being more those of a school board clerk or business manager of today than those of a modern superintendent. Cleveland, Ohio, first appointed the secretary of the school board as "acting manager of schools."

In some places there was no salary connected with the position and some man with sufficient leisure time had to be secured, often regardless of the lack of other qualifications. The office of public school superintendent is comparatively recent without much legal status and having much or little direct power, according to the mood and composition of the board. It is not

difficult to see that the position of superintendent is very different in various places and is today vastly different from that of over eighty years ago. I suppose that the relations of the superintendent to the school board and vice versa are as varied as the places and people represented.

If later we are to consider some types of school board members and their relations to the superintendent, it may be logical in discussing the relations of the superintendent to the school board to consider also a few general types of school superintendents, and how these types would naturally react toward their boards. It may be stated that in discussing types of people we can only approximate the truth, for human beings are so varied and complex that no one can definitely and finally classify any one individual and be sure that no mistake has been made. So these types are composite pictures rather than illustrations of any single individual.

As previously stated, some of the early superintendents were not always schoolmen and even if by chance they were, they had no special training for the position. These we might classify as the first type. At this period of development school boards still considered themselves executive as well as legislative bodies and under such conditions this type of superintendent usually became a mere head clerk or manager for the board.

A second type was the superintendent who also was without special training but possessed school experience because he emerged from the teaching ranks and, in addition, had served for a period as a principal, generally of a high school. Since by this time boards were granting more freedom to superintendents, and because of his teaching and executive experience, such a man, if he had any ability along executive and organization lines, developed into a strong superintendent. He, however, received his training at the expense of the community. If he had no special talent for leadership he did not become a good superintendent for his experience as teacher and principal did not necessarily assure him of success. These two types are today only infrequently encountered.

Another type is the man without adequate professional preparation who can impress the board members and parents by his fluent speech and ingratiating ways. He feels it is not necessary for him to be thorough in his work. He is apt to rely more on his ability to "handle people" than upon straight-forward business methods. He may also consider any of the more discriminating board members and parents as mere meddlers. His relations to the board members on the whole are only pseudo-professional. This is the third type.

A fourth type is the very young man who has had good training but no experience. His success and relations to his board will depend upon the amount of wisdom and tact he possesses, and to a large degree upon the kind of board with which he finds himself associated. The best place for such a superintendent to begin his career is in a community in which the school board consists of capable experienced citizens, sincerely desirous for the young man's success as well as the adequate development of the schools.

The man assuming the duties of city superintendent rather late in life is the fifth type. Generally he is no longer mentally flexible

*Read at the 47th Annual Meeting of the Association of School Superintendents and School Board Members of Michigan, held March 27, 1922, at Ann Arbor, Michigan.

enough to accommodate himself easily and quickly to the new conditions. He is also likely to be too conservative and have only a limited educational outlook.

Then, there are those superintendents who have hobbies, or put undue emphasis upon some line of school development, such as the man who develops the material side of the system but neglects the administrative and teaching phases. Also there is the man who makes the schools into a perfectly organized machine and runs them by a system of bells and press buttons. For our purposes we shall not stop to discuss these types but shall consider the next type the sixth and last.

This includes the young man or woman who has definitely planned to become city school superintendent and has systematically studied to prepare for such a position; who has had experience as teacher, possibly as principal, and has also been a successful superintendent in a small town. This type is similar to type four but is more mature and has had executive experience; one who regards the duties and responsibilities of the office of superintendent as being second to none and worthy of the best thought and endeavor. Such a person will have a true professional attitude toward his work and will demand and receive respect for the position and himself. This type is most certain of success for, while living actively and intensely in the present, he will hold a clear and certain vision of the future in education.

The Level of the School System.

In general, from my own rather limited observations, I gather that some of the reasons that superintendents of today do not succeed are, the lack of sufficient preparation, the lack of zeal and energy, and, probably more than all else, the inability to win the confidence of the board members and the public. The superintendent is the executive head of the present day school organization and as such should have and take the initiative in all school matters. He should also be one of the recognized leaders in the community and should mould public opinion. He must be independent of political, social and religious influences in forming his decisions.

No school system can rise much above the level of the superintendent. His character, attainments, and power will largely determine its progress. He must, after all, be the real driving power and the planning force, using to the best advantage such material as he may happen to have associated with him on the school board, and with it and through it reaching the citizens of the community that they may more readily follow his guidance.

A superintendent should have all the authority he can use. If he is wise and capable, this should spur him on to increased effort and better results. If, on the other hand, he is a misfit, such freedom will the sooner bring to light his shortcomings.

It follows then, that in his relation to the board members, the superintendent must first of all be frank and sincere. He must also be earnest and loyal, and respect such counsel and support as the board members give him, always keeping firmly in mind the fact that he is not only dealing with men and women of today, but in a very direct and positive way is shaping and influencing the lives of the men and women of tomorrow.

When we come to discuss the second part of our topic, the relation of the board members to the superintendent, we find an interesting situation, especially if we consider the different types of people who, for many and varied reasons, accept membership on school boards. Many classes are represented, ranging from

the conventional ward politician to the college professor, from those whose motives are low to those having the highest ideals and purposes. Several prominent educational writers classify board members as desirable and undesirable. These lines are drawn vertically, separating the members into groups as follows:

Desirable and Undesirable Members.

Under the heading of Desirable Board Members we find:—Merchants, Manufacturers, Bankers, Lawyers, Physicians, Contractors, Successful College Graduates.

The list of Undesirable Members includes:—Unsuccessful Men, Inexperienced young men, Old men, retired from business, Politicians, Saloon Keepers, (a class just now happily missing from our life), Uneducated and Ignorant Men, Men in minor business positions and women.

It is quite interesting to note that one writer lists bachelors among desirable members for the reason that such men are free, having no domestic cares, and although having no children in the schools, are generally very fond of children and youth but the same authority claims that a woman who is unmarried or married and childless will simply have theories about children. I wonder if the educator referred to did not himself have some "theories" instead of facts about school board members.

Would it not be a better classification to divide our citizens by horizontal rather than vertical lines and select only from among the highest group because of general intelligence, sustained interest, and concern in children and schools, and vital interests in the civic and religious welfare of the community? Many a successful business man is successful merely in the accumulation of money but cannot be helpful to a superintendent in character building. Sometimes such men live so close to the dollar that adequate salaries and equipment seem wild extravagances.

Others in the desirable list can be pointed out as being sometimes far below the standard requirements which should be set for board members. Every trade, business, or profession has members not especially a credit to the community, who are narrow-minded, backward-looking individuals. Some are selfish and always looking for personal gain. The point is this: we might better think less of whether the individual is butcher, baker, or candlestick maker, man or woman, and think more about the individual as such and try to determine whether the candidate has those qualifications which will enable him or her to properly evaluate the cultural as well as practical things of life.

We have not the time, and it would be of no particular value, to discuss the relations to the superintendent of some of the less desirable types of board members. It will be sufficient for us to consider boards made up of members who more nearly approach the ideal in their relations to the superintendent. Such members will have confidence in and show loyalty and respect to a capable superintendent, and will be at all times frank and sincere. They will expect the superintendent to take the initiative and to guide and direct. They will be independent in their thinking and in forming decisions, and will fully understand every question which comes up for a vote. All actions of such a board will correlate and supplement those of the superintendent.

Convincing Board and Community.

In automobile terms, we may compare the relations of the board to the superintendent by saying that all demands and recommendations of the superintendent receive their "block test" when presented to the board. The board, being

the testing place or block and representing the public, should give a fair reflection of the reactions such recommendations would produce upon the general public. It is reasonable to assume that if a superintendent can convince his board of the soundness of his arguments and the necessity of his demands then certainly the whole community would likewise be readily convinced and converted.

If board members as well as superintendents would remember and believe that public schools are in existence for the sole purpose of bringing the greatest good to the child and through him to the human race; if, I repeat, this truth was generally accepted, many serious mistakes would be avoided and many boards and superintendents would be working in closer harmony.

We have briefly considered the earliest schools in this country. We think we know something of the present-day schools, but who will with certainty describe the schools of the future? It is considered visionary and impractical by some to attempt to visualize the demands of the coming generations. But we must try to imagine what the schools of the next twenty or thirty years will be, else we cannot plan wisely for today, and our vision will become a reality only in proportion to the amount of faith we have in our children and in ourselves and to the amount of constructive work we are willing to do.

It is a wise community which realizes that money spent for public schools is one of the soundest investments that can be made. When every citizen is deeply concerned about the welfare of his own children, his neighbor's children, and the children of the entire city, then we shall have such public schools as shall best fit the child for life, not merely fit him for a particular groove in life, but develop all of his powers so that he shall really live and be a blessing to mankind.

Such schools we must have if this country is to fulfill its destiny, for it is only through the public schools that every child can be reached. We are only just beginning to realize what a powerful agency for good we can have in our school systems and instead of in niggardly fashion counting how many pennies it is costing us each year, we ought to be thrilled by the sight of thousands of boys and girls who are thus enabled to gain all that can make life worth while.

In conclusion, I would like to say a word concerning the importance of the office of the superintendent. It is true, that for too long time and in too many places the office has not been considered as important or as dignified as it deserves, and the salaries connected with it have, on the average, been distressingly low. Communities must depend on superintendents to direct and develop their schools. Therefore it behooves them to regard the position as second to none and they can attract men and women of superior qualifications only by paying salaries comparable to those received in any of the professions.

It is no task for a novice or for a timid heart to undertake to guide a work so broad and far reaching. Such a task calls for vision, experience, and courage, and the ability to inspire others with his or her enthusiasm. Only one who fully appreciates the sacredness of this work can be safely intrusted with the welfare of our children.

The school board of Seattle, Washington, has met a sensational charge of extravagance by quietly holding to the integrity and service of the schools. The storm has blown over. Now a press heading reads "The dove of peace flaps wings at school solons."

Graphic Aids in School Administration

E. L. Bowman, New York, N. Y.

Article III: Establishing Routine Through Graphs — Conclusion

A third type of routine chart is the column-map chart, as shown in Figure 4, "routine of lesson plans." This type of chart can be made to show origin and destination of each of the different forms or documents used, the number of times each is handled, and the individuals concerned. Each individual is given a column. If therefore the number of individuals to be considered is very large, the chart will be unwieldy and at the same time more difficult to read. This type gives clear information as to the duties of each individual and shows the person who should next handle the routine.

In the chart shown, the instructor is charged with the responsibility of making out lesson plans for the work of the coming week, delivering a copy to the head-of-department at his school on Friday afternoon. These plans are made in duplicate, the original going to the head of the department, while the carbon copy is kept on the instructor's desk in an appropriate binder as a guide for his teaching during the ensuing week.

The head of the department collects the plans from each of his departments and forwards the whole the same day to the office of the director or supervisor. Here the director's secretary is instructed to place in a binder marked "Current Plans" the plans for the coming week, so that Monday morning the director may study the plans for the week and determine where and when he will inspect, and when and where his help is needed by the instructors.

The plans which have previously occupied the current-plans binder are then transferred to the general files for use in reference and comparison. It is convenient and desirable to be able to collate the plans of instructors for the purpose of determining their relative worths.

If the regular instructor is prevented by illness or otherwise from discharging his duties, he notifies the director, and a substitute teacher is called. The director first reviews with the substitute the work to be done, using the office

copy of the lesson plan. The substitute reports for duty in the school, and at once refers to the instructor's desk copy for continued guidance from period to period and from day to day during the time the regular instructor is absent.

If the substitute acts for more than a day, he is required to make out plans for the continuance of the work. In this he is guided by the lesson plans on file in the instructor's desk, running back to the beginning of the semester or the year. He finds that it is best to record his plans for the next lesson immediately after the class leaves the room, and while the whole matter is still fresh in mind. The substitute instructor files his plans with the head of the department for transmittal to the director precisely as a regular instructor is required to do.

Where the number of individuals concerned is large, and where the routine is complicated, the "Progression type" of chart will be found of most value. Figure 5 shows a portion of one of these charts. Here the order of progress of the unit is indicated by the order in which the symbols occur from top to bottom of the chart. To the left of the operation symbol is found the name of the individual responsible while to the right is a brief statement of his duties at this juncture.

The circle indicates action as described at the left. A letter C surrounding the circle indicates a conference. A diamond indicates inspection for quantity, and a square, inspection for quality. A diamond superposed over a square indicates inspection for both quantity and quality. See Figure 1.

The chart from which Figure 5 is taken is 15 by 24 inches in size, and is arranged to fold so that it may be inserted in the "routine book," as shown in Figure 1. It is signed at the bottom as approved by the heads of the two divisions of the school system, and hence has the force of official action.

This chart is not offered as an expression of an ideal way of handling routine of production

shopwork in Smith-Hughes classes. It is a charting of actual practice in a given school system, reduced to written form for the information of those concerned. Many improvements in practice might be made, and the routine thus simplified.

An examination of the chart will show that the instructor receives two copies of the shop-order, Form 752 (see Figure 6) together with a "tickler-card" which is a postcard printed with a receipt for the shop order, Figure 8. The tickler-card is filled out and signed by the instructor after he has examined his stores. When the tickler-card is received in the office of the director, the shop-order number is posted on the "shop order production record." The card itself is filed behind a guide card indicating the date when the job will be finished, with a signal to indicate the school from which it comes.

In posting the delivery date on the shop-order production record, a map tack is thrust through a small rectangle of paper bearing the number of the shop order. The tack is then fixed firmly in the board. To indicate the shop and school responsible for the work, horizontal lines are ruled across the record. Vertical columns are provided to show the week and day when the job will be finished. The intersection of these two columns, vertical and horizontal, determines the location of the tack. Thus shop order No. 4053, being executed at East high school drafting rooms, is promised for February 8th. The tack is placed at the intersection of the horizontal space assigned to East High drafting rooms with the vertical column for February 8th. It is therefore easy to count the number of orders pending in a given shop, and to tell how many jobs are to be finished on a given day.

If the instructor lacks materials with which to execute the shop order, he calls for the necessary supplies on the requisition form, No. 711H, Figure 7. This passes through the regular purchasing routine, and the supplies finally arrive in the possession of the instructor. Mean-

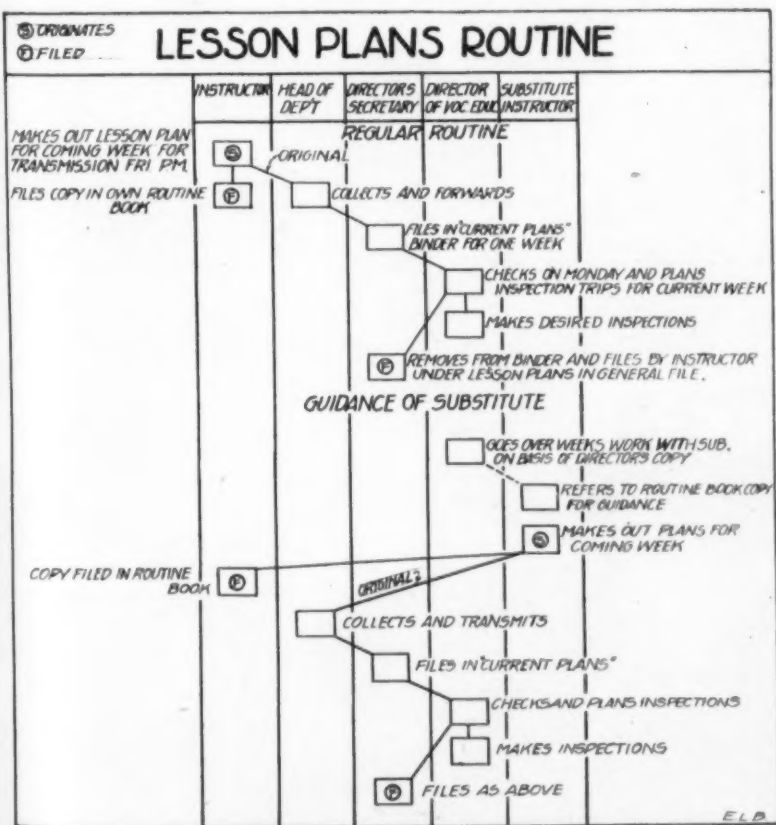


FIG. 4. COLUMN-MAP CHART OF LESSON PLAN PROCEDURE.
A clear statement of duties of agents and disposition of documents.

FIG. 6. SHOP ORDER.

This copy is filed with the instructor. Other copies are for reference in the Business Office, in the office of Director of Vocational Education, and in the office of Principal of the school where the work is being done. One copy is returned by the instructor as a report when the work is done.

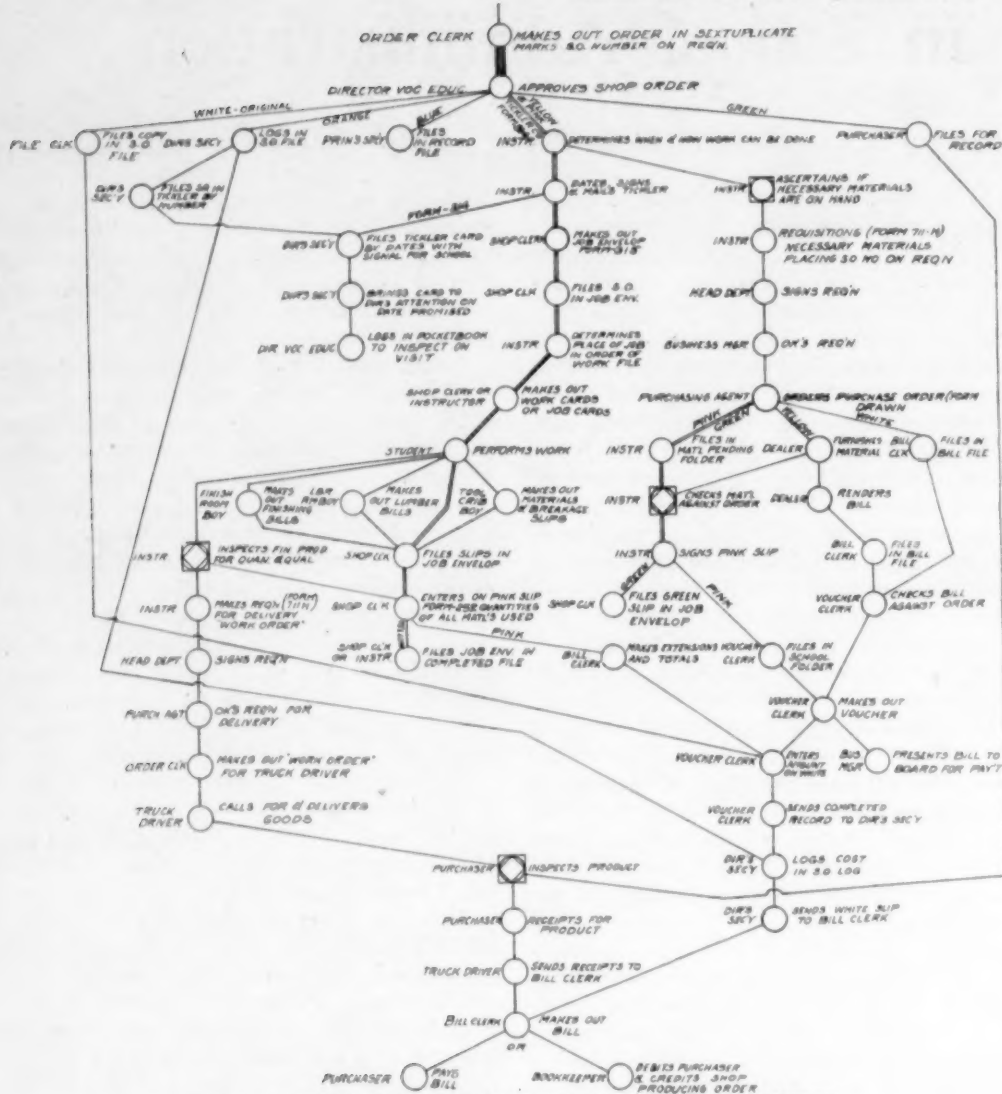


FIG. 5. PROGRESSION LINE CHART OF SHOP ORDER ROUTINE.
A compact statement of the duties of instructors and others in carrying out the "productive work" provision of Smith-Hughes vocational classes.

while, the teacher is planning how and when he will have the work done in the school-shop. He makes out or causes to be made out the job cards, Figure 9, which are the assignment of work to the students.

The shop-clerk is a bookkeeping student who is earning credits by doing the shop bookkeeping, handling real work instead of hypothetical or imaginary transactions. He takes care of much of the routine, such as making out the job envelope, (Figure 10) a container for all the papers in the case. He attends to the proper disposition of all material slips and time cards, filing them in the proper job envelopes until the completion of the job. When the instructor has inspected the finished job, the shop-clerk summarizes the time and materials consumed in production of the article, and posts this data on the copy of the shop-order which is sent to the business office for record.

With a chart like Figure 5, all the essentials of the above can be compressed in a small space, yet be given in sufficient detail to be a complete guide to all concerned in the unit of routine. By such a chart it can be determined who is at fault if the business is not carried on according to orders. If there is a misunderstanding on

any point, the misconception can be cleared up and the business of the department facilitated by reference to the chart.

Other examples of the four forms of routine charts might be given if space permitted. The specimens displayed embody the essentials of each type, and will enable any executive to give directions for making a chart of his routine units. After all, the proof of the pudding is in the eating thereof; and the proof of the worth of graphic charts of routine is in the ease and precision which they make possible in the daily handling of habitual practice.

There is one other form of graphic chart which has been found of great service to busy administrators. I refer to the "work program," or monthly summary of things to be done. It is of great advantage to have on the desk, at the beginning of each day's business, a list of things to be done today. Competent executives, from the President of the United States down, follow this plan. It makes for definiteness and precision in the day's work, and prevents embarrassment and losses from lapses of memory.

In the same way, a monthly plan of work helps to survey the whole month's duties, allows planning to take care of duties well in advance

THE SCHOOL DISTRICT OF THE CITY OF ERIE				SPECIAL REQUISITION	
Business Manager: <i>D.B. McGraw</i>				Special Requisition No. 128	
Please furnish the following:				Approved: <i>C.W. McGraw</i> Date 17 Jan 1932	
Item	Quantity	DESCRIPTION OF ARTICLE OR REPAIR	Estimated Cost	CAN BE PURCHASED FROM	Department
	1 doz	1 1/2" Pinch Dogs		Tata Steel Co	
		Do deute 50#4093			

FIG. 7. REQUISITION FOR MATERIAL TO BE USED IN EXECUTING A SHOP ORDER.

A CH Co E G J L		6 Feb 22 4093	
Product PATTERN FOR TOOL POST HOLDER		Date Comp. S. O. No.	
104-50			
I have received the Shop Order described above, and expect to complete the work by the date marked above.			
I have material on hand to complete the Shop Order.			
I have requisitioned the necessary materials on Special Requisition No. 128 dated 17 Jan 22			
Signed: <i>D.B. McGraw</i>		Instructor	
Date: 17 Jan		1932	
		Academy High School	

FIG. 8. TICKLER CARD.
giving to the Vocational Instructor the date of completion and status of materials for a given shop order.
Printed on a postal card.

of need, and serves as a check on engagements to be met. One form of monthly procedure chart is given in Figure 11. Here are noted the duties and responsibilities to be met by an administrator during a given month.

In preparing this procedure chart, a tracing was first made on tracing cloth. A Vandyke brown negative print was then made. From this negative prints showing blue lines on a white ground were made by the use of ordinary blue-print paper. Twelve prints, representing a year's work, were stored in a folder in the large drawer in the right-hand pedestal of the executive's desk.

The left-hand slide of the desk was removed, and a depression was chiseled out deep enough to allow a piece of plate glass nine by twelve inches to be inserted so that the surface of the glass was flush with the surface of the desk slide. A hole was bored from the center of the depression through the slide, so that a pencil might be inserted to raise the glass when the chart was to be changed.

(Continued on Page 129)

THE SCHOOL DISTRICT OF THE CITY OF ERIE, PA.					
NAME: <i>Ernest Salmen</i>		STUDENT NO. 53		DATE: Jan 18 32	
TIME CARD					
ACADEMY HIGH SCHOOL SHOPS					
MACH. NO.	DESCRIPTION OF WORK	NO. PCS.	ORDER NO.	ELAPSED TIME	CLOCK RECORD
52	Tool Post Holder	1	4093	3:19	11:32
"	"	"	"	1:55	11:35
"	"	"	"	2:02	11:40
"	"	"	"	3:40	11:44
"	"	"	"	1:45	11:46
"	"	"	"	0:32	11:47
"	"	"	"	3:17	11:50
"	"	"	"	0:6	11:51
"	"	"	"	3:05	11:54
"	"	"	"	1:30	11:56
TOTAL TIME				21:04	

FIG. 9. JOB CARD,
assigning productive work to a given student and containing all necessary information. Time Card on which student records the time consumed on a given job.

Improvement of School Grounds

Louise Klein Miller, Landscape Architect, Board of Education, Cleveland, Ohio

Third Article — Conclusion

There are two types of plants from which to make a planting list: Evergreens and deciduous trees and shrubs. Narrow-leaved evergreens are very susceptible to atmospheric conditions and even the hardy varieties are not hardy under varying conditions of climate, exposure, and soil. Many evergreens are planted with very disappointing results because varieties are selected which cannot withstand the hazard of local treatment.

A humid atmosphere is most congenial to most evergreens, a condition frequently found in their native habitat. Artificially applied water helps, but by planting evergreens with deciduous trees and shrubs, the constant transpiration of moisture from leaves will afford a constant supply of moisture, which will ameliorate unnatural conditions of dry smoke and soot laden air.

Broad-leaved evergreens, rhododendrons, Kalmias, Mahonia, Azaleas transpire moisture all during the year. They should be thoroughly watered in the fall and not allowed to freeze in a dry condition.

Drying of the mass of fibrous roots is fatal. In nature where they grow, the sub-soil frequently contains quantities of moist, decaying wood, which serves a reservoir of a constant supply of water. Such conditions might be artificially produced. Never use fresh manure or any commercial fertilizers containing lime. Bone meal is sure to overcome acidity in the soil, which is necessary for Rhododendrons, and other plants of the same order. Mulch the beds with decaying leaves and a two inch layer of well-rotted stable manure.

These plants, expensive and difficult to grow, will repay the effort, for they are effective in flower and foliage, grow in the shade, and give a charm of setting which a well planned and constructed school building requires.

Trees for Schoolyard Planting.

Trees selected for schoolyard and adjacent street planting should be hardy, not susceptible to insect pests and plant diseases, symmetrical in character, and long lived.

A group of trees entirely hardy under all conditions includes:

Acer saccharum	Sugar Maple
Quercus Alba	White Oak
Quercus Coccinea	Scarlet Oak
Quercus Palustris	Pin Oak
Quercus Rubra	Red Oak
Tilia Tomentosa	Silver Linden
Ulmus Americana	American Elm
Ulmus Glabr	Scotch Elm

Trees for use in congested districts:

Aesculus Hippocastanum	Tilia Europaea
Conanum	Ulmus Campestris
Horse Chestnut	Tree of Heaven
	Maiden Hair Tree
Ailanthus Glandulosa	Oriental Plane
Ginkgo Biloba	Pin Oak
Platanus Orientalis	Black Locust
Quercus Palustris	Willow
Robinia Pseudacacia	European Linden
Salix (In Variety)	English Elm

Shrubs which are hardy under adverse conditions:

Aralia Spinosa	Viburnum (In Variety)
Aralia Pentaphylla	Hercules Club
Berberis Thunbergi	Five Leaved Aralia
Forsythia (In Variety)	Japanese Barbary
Hibiscus Syriacus	Golden Bell
Ligustrum (In Variety)	Rose of Sharon
Spirea (In Variety)	Privet
Symphoricarpos (In Variety)	Spirea
Syringa Vulgaris	Snowberry
	Common Lilac
	Viburnum

Shrubs and Hedge Plants.

Available short and broad leaved evergreens, deciduous trees and shrubs adapted to various sections and conditions of the country can be

secured from a reliable landscape architect or nursery.

Plants useful as barriers or protection for lawns should be of compact habit of growth, thorny character and amenable to shearing. Some good hedge plants hold their leaves all winter.

Mahonia Aquifolium	Oregon Grape
Picea Excelsa	Norway Spruce
Pyracantha Coccinea	Evergreen Thorn
Lelandi	Arborvitae
Thuja (In Variety)	Canadian Hemlock
Tsuga Canadensis	

Some plants of dwarf habit of growth, which can be kept in a low compact form by severe pruning are:

Azalea Amoena	Hardy Evergreen
Berberis Thunbergi	Azalea
Buxus Suffruticosa	Japanese Barbary
Ilex Glabra	Dwarf Box
Ligustrum Iboia	Inkberry
Regeliana	Regels Privet
Rosa Rugosa	Japanese Rose

Entrance and Balustrade Ornamentation.

Formal entrances, terraces, balustrades, steps require a more formal treatment than plantings elsewhere on the school site. Trees and shrubs selected for this purpose should be specimens, which lend themselves to natural, compact effect when pruned, or which naturally possess an even, close habit of growth.

Frequently available planting space near the building is limited, windows must not be shaded, consequently trees selected must be of pyramidal form, or those which yield to severe pruning.

Some good types are:

Acer Saccharum Pyramidalis	Hibiscus Syriacus
Acer Saccarum Monumentale	Thuja Occidentalis Pyramidalis
Betula Alba Fastigiata	Pyramidal Silver Maple
Juniperus Communis	Columnar Sugar Maple
Hibernica	Pyramidal White Birch
Juniperus Virginiana	Rose of Sharon
Picea Excelsa Pyramidalis	Irish Juniper
Populus Alba Pyramidalis	Red Cedar
Quercus Robur Fastigiata	Pyramidal Norway Spruce
Low growing evergreens of compact habit	Bolles Poplar
	English Oak
	Pyramidal Arbovitae

and slow growth which are useful for intimate planting near a building include:

Buxus (All Varieties)	Box Wood
Chamaecyperis Obtusa	Dwarf Japanese Cypress
Nana	Japanese Holly
Ilex Crenata	Oriental Spruce
Picea Orientalis	Swiss Stone Pine
Pinus Cembra	Swiss Mountain Pine
Pinus Montana	Dwarf Mountain Pine
Pinus Montana Mughus	Japanese Yew
Taxus Cuspidata	Japanese Yew
Taxus Cuspidata Nana	Canadian Hemlock
Tsuga Canadensis	

Flowering shrubs may be selected to produce a succession of blooming in early spring before the leaves appear:

Azalea Lutea	Pinkster Flower
Azalea Nudiflora	Red Bud
Cercis Canadensis	Japanese Quince
Chaenamelos Japonica	Flowering Dog Wood
Cornus Florida	Golden Bell
Forsythia (In Variety)	Early Fragrant Honey-suckle
Lonicera Fragrantissima	Magnolia
Magnolia (In Variety)	Oregon Grape
Mahonia Aquifolia	Bridal Wreath
Spirea Prunifolia	Dog Woods
Flora Plena	Thorn
Cornus (In Variety)	Silver Bell
Crataegus (In Variety)	Honeysuckle
Halesia Carolina	Van Houttes Bridal Wreath
Lonicera (In Variety)	Lilac
Spirea Van Houttei	High Bush Cranberry
Syringa (In Variety)	Viburnum Tomentosum
Viburnum Opulus	Single Japanese Snow-ball
Flame Colored Azalea	

Early summer produces:

Diervilla Hybrida	Philadelphus (In Variety)
Hydrangea Arborescens Sterilis	Hybrid Weigela
Kalmia Latifolia	Hills of Snow
Ligustrum Iboia	Mountain Laurel
Mock Orange	Japanese Privet

Late summer and early autumn produce comparatively few flowering shrubs:

Hydrangea Arborescens	Rose of Sharon
Hydrangea Paniculata Grandiflora	Wild Hydrangea
	Hardy Hydrangea
	Hibiscus Syriacus

Autumnal Color Effects.

Color can be continued in the shrub border by a careful selection of shrubs and trees which have fine autumnal coloring, and bright twigs in winter, which produce fruit valuable not



MEMORIAL SCHOOL, CLEVELAND, OHIO.
The landscaping makes an excellent background for a school festival.



EUCLID PARK SCHOOL, CLEVELAND, UNDER CONSTRUCTION.



THE EUCLID PARK SCHOOL AS IT WILL APPEAR WHEN THE LANDSCAPING IS COMPLETED.

only for color effect, but for a food supply for birds during autumn and winter:

Red Maple, Hercules, Club, Barberry, Beauty Fruit, American Bittersweet, Eunonymus, Ilex Bayberry, Smooth Sumac, Rhus, Roses, Snowberry, Indian Currant, Blueberry and Viburnum.

These shrubs may be used to the best advantage in grouping and arrangement which will

enhance the architectural features of the building, afford barriers, screens, and other desired effects.

The new Sunbeam School designed for crippled children will be as complete as any school in the country. The site affords a commanding view of the city. The school of one story type, of a simple design, the classrooms open upon an esplanade to 50 x 200', to which child-

ren will have access from every classroom, enabled to wheel their chairs, or walk down the ramps without effort. An additional ramp will afford access to the formal garden below.

The suggestive plan with the building in the process of construction give some idea of the careful thought which is necessary to make the most advantageous use of the problems which present themselves.

Revision of School Accounting Reports

Arthur B. Moehlman, Director of Statistics and Records, Board of Education, Detroit, Mich.

None of the post war problems developed in education, have been of greater immediate importance than that of finance. Better accounting, budgeting and control of expenditures have been discussed at every educational gathering. The importance of better reports,

based upon standard definitions of function, has long been felt by superintendents of larger city school systems. The changing educational conditions have brought with them new functions and re-organizations.

More than a year ago the "Inter-City confer-

ence," composed of the superintendents of schools of New York, Chicago, Detroit, Cleveland, Buffalo, Cincinnati, Indianapolis, Milwaukee, Pittsburgh and Louisville, under the chairmanship of Supt. R. G. Jones of Cleveland, appointed a research committee to develop

UNIFORM SCHOOL ACCOUNTING REPORT					
FOR CITIES OF 100,000 POPULATION OR MORE					
Developed and proposed for adoption by a joint committee representing the Bureau of Education, Department of Superintendence, National Association of Public School Business Officials and the Inter-City Conference.					
PART II—FISCAL STATISTICS FOR THE YEAR ENDING 192					
Read carefully the "Explanation of Items" on pages 8, 9 and 10 before filling this blank.					
City	State	Signature and title of officer making the report			
A—RECEIPTS AND BALANCES					
SOURCE	Federal Money	State Money	County	Township, District and Municipal	Total
1. Income from permanent funds					
2. Income from leases of school lands					
3. General appropriations from Federal, State and County sources					
4. Specific appropriations from Federal, State and County sources					
5. Emergency appropriations					
6. From taxation for maintenance purposes (property, business, poll taxes, etc.) excluding debt obligations					
7. From taxation for debt service					
8. From other school districts for tuition					
9. All other revenue receipts (a) fines and penalties; (b) gifts, bequests, contributions; (c) rents; (d) interest; (e) tuition (from non-patron only) etc.					
10. Total revenue receipts (1-9 inc.)					
11. Non-revenue receipts (a) From loans and bond sales; (b) From sales of property and proceeds of insurance adjustments; (c) Other non-revenue receipts					
12. Total non-revenue receipts					
13. Balance and inventory at beginning of year; (a) Cash balance on hand from previous school year; (b) Stock on hand at beginning of year					
14. Whole amount available for use during year					
B—PAYMENTS					
B-1. Administration (General Control)					
Under expenditures for general control should be included all overhead costs or expenses of regulative and executive service. It involves all expenditures for the business and educational administration of the city public schools.					
Under this activity should be included the following offices: superintendent of schools, deputy superintendent, assistant superintendent, district or division superintendents, chiefs of compulsory attendance and census, directors of medical and dental inspection and nurse service, directors of research, board of examiners, vocational guidance, business and financial affairs, and all clerical assistants attached to the offices mentioned under executive in the following order:					
ITEMS	Salaries	Supplies	Other Objects	Total	
1. School elections					
2. Board of Education and Secretary's office					
3. Finance office and accounts					

ITEMS	Salaries	Supplies	Other Objects	Total
4. Officers in charge of buildings				
5. Officers in charge of supplies				
6. Legal services				
7. Operation and maintenance of administration buildings				
8. Superintendents of schools and their offices				
9. Administration of vocational relations and school census				
10. Administration of co-ordinate activities				
11. Other expenses of general control				
12. Total				
B-II. INSTRUCTION				
(a) General Supervision				
SCHOOLS	Salaries of Supervisors	Supervisory Clerical Service	Other Expenses of Supervision	Total
13. Kindergarten instruction				
14. Elementary instruction:				
I. Day school				
II. Summer school				
III. Evening school				
15. Total elementary instruction				
16. Special instruction:				
I. Education of the anemic				
II. Education of the blind				
III. Education of the deaf				
IV. Education of the crippled				
V. Education of the feeble-minded				
VI. Education for the correction of defective speech				
VII. Education of mentally defective children				
VIII. Classes for gifted children				
IX. Education of incorrigible (truant) children				
X. Education of tubercular children				
17. Total special instruction				
18. Intermediate or junior high school instruction:				
I. Day school				
II. Summer school				
III. Evening school				
19. Total intermediate or junior high school instruction				
20. High school instruction, including technical and commercial high schools:				
I. Day school				
II. Summer school				
III. Evening school				
21. Total high school instruction				

SCHOOLS	Salaries of Supervisors	Supervisory Clerical Services	Other Expenses of Supervisors	Total
22. Vocational, trade and continuation schools: ¹⁰				
I. Day schools:				
(a) Full time				
(b) Part time				
II. Evening schools				
23. Total vocational, trade and continuation schools				
24. Teacher training (city normal schools): ¹¹				
I. Day school				
II. Summer school				
III. Evening school				
IV. Vocational teacher training (Smith-Hughes)				
25. Total teacher training				
26. Collegiate instruction (under city board of education): ¹²				
27. Grand total supervision				

B-II (b) INSTRUCTION PROPER
Instruction cost should include all personal services: (a) administration within a building; (b) teaching; (c) clerical and (d) supplies and (e) test, supplementary and school library books devoted to the instruction of children in any given activity.

SCHOOLS	Administrative	Clerical Services	Teacher's Salaries	Educational Supplies	Fee Text and School Library Books	Other Expenses of Instruction	Total
28. Kindergarten instruction							
29. Elementary instruction: ¹³							
I. Day school							
II. Summer school							
III. Evening school							
30. Total elementary instruction							
31. Special instruction:							
I. Education of the albino							
II. Education of the blind							
III. Education of the deaf							
IV. Education of the crippled							
V. Education of the dumb							
VI. Education for the correction of defective speech							
VII. Education of mentally defective children							
VIII. Classes for gifted children							
IX. Education of incorrigible (truant) children							
X. Education of tubercular children							
32. Total special instruction							
33. Intermediate or Junior High School instruction: ¹⁴							
I. Day school							
II. Summer school							
III. Evening school							
34. Total intermediate or junior high school instruction							
35. High School instruction, including technical and commercial high schools: ¹⁵							
I. Day school							
II. Summer school							
III. Evening school							

PAGE 3.

ITEMS	Salaries	Other Objects	Total
58. Community centers, including janitor service, fuel and light			
59. Operation of playgrounds, including janitor service, fuel and light			
60. School gardens			
61. School savings banks			
62. Other auxiliary agencies			
63. Total auxiliary agencies			

B-V. Operation of School Plant -

SCHOOLS	Personal Services (wages of Janitors, Engineers, etc.)	Engineers' and Janitors' Supplies	Gas and Electricity	Fuel	Telephone	Water	Other Expenses of Operation	Total
65. Kindergarten instruction								
66. Elementary instruction								
67. Special instruction								
68. Intermediate or junior high school instruction								
69. High school instruction, including technical and commercial high schools								
70. Vocational, trade and continuation schools								
71. Teacher training (city normal schools)								
72. Collegiate instruction (under city board of education)								
73. Total operation of school plant								

B-VI. Fixed Charges

SCHOOLS	Proportions	Rent	Insurance	Taxes	Compensation of Law	Proportions of Utilities	Other Expenses of Fixed Charges	Total
74. Kindergarten instruction								
75. Elementary instruction								
76. Special instruction								
77. Intermediate or junior high school instruction								
78. High school instruction, including technical and commercial high schools								
79. Vocational, trade and continuation schools								
80. Teacher training (city normal schools)								
81. Collegiate instruction (under city board of education)								
82. Total fixed charges								

B-VII. Maintenance of School Plant -

SCHOOLS	Repair of Buildings and Upkeep of Grounds	Repair and Replacement of Equipment and Machinery	Repair and Replacement of Educational Equipment and Furniture	Other Expenses of Maintenance	Total
83. Kindergarten instruction					
84. Elementary instruction					
85. Special instruction					
86. Intermediate or junior high school instruction					
87. High school instruction, including technical and commercial high schools					
88. Vocational, trade and continuation schools					
89. Teacher training (city normal schools)					
90. Collegiate instruction (under city board of education)					
91. Total maintenance of school plant					

PAGE 5.

SCHOOLS	Administrative	Clerical Services	Teacher's Salaries	Educational Supplies	Fee Text and School Library Books	Other Expenses of Instruction	Total
36. Total high school instruction							
37. Vocational, trade and continuation schools: ¹⁶							
I. Day schools:							
(a) Full time							
(b) Part time							
II. Evening schools							
38. Total vocational, trade and continuation schools							
39. Teacher training (city normal schools): ¹⁷							
I. Day school							
II. Summer school							
III. Evening school							
IV. Vocational teacher training (Smith-Hughes)							
40. Total teacher training							
41. Collegiate instruction (under city board of education): ¹⁸							
42. Tuition payments to other school corporations							
43. Grand total instruction proper							

B-III. CO-ORDINATE ACTIVITIES -

SCHOOLS	Compulsory Attendance	Medical Inspection	Dental Inspection	Nurse Service	Total
44. Kindergarten instruction					
45. Elementary instruction					
46. Special instruction					
47. Intermediate or junior high school instruction					
48. High school instruction, including technical and commercial high schools					
49. Vocational, trade and continuation schools					
50. Teacher training (city normal schools)					
51. Collegiate instruction (under city Board of Education)					
52. Total co-ordinate activities					

B-IV. Auxiliary Agencies

ITEMS	Salaries	Other Objects	Total
53. Libraries (public): ¹⁹			
54. Baths (not regular school instruction): ²⁰			
55. Transportation of Children: ²¹			
(a) Physically defective			
(b) Children living at great distances			
56. Care of children in institutions (paupers, ungraded)			
57. Public lunches and lunch room deficits, excluding equipment: ²²			
58. Adult lectures			

PAGE 4.

SCHOOLS	Repair of Buildings and Upkeep of Grounds	Repair and Replacement of Equipment and Machinery	Repair and Replacement of Educational Equipment and Furniture	Other Expenses of Maintenance	Total
87. High school instruction, including technical and commercial high schools					
88. Vocational, trade and continuation schools					
89. Teacher training (city normal schools)					
90. Collegiate instruction (under city board of education)					
91. Total maintenance of school plant					

B-VIII. Capital Outlay

SCHOOLS	Portion of Land	Improvements to Site	New Buildings	Alterations and Repairs to Existing Buildings	Replacement of New Buildings	Alterations and Repairs to Old Buildings	Equipment for Old Buildings	Total
92. Kindergarten instruction								
93. Elementary instruction								
94. Special instruction								
95. Intermediate or junior high school instruction								
96. High school instruction, including technical and commercial high schools								
97. Vocational, trade and continuation schools								
98. Teacher training (city normal schools)								
99. Collegiate instruction (under city board of education)								
100. Total capital outlay								

B-IX. Debt Service

101. Redemption of short time loans	
102. Interest on short time loans	
103. Redemption of bonds: (a) Payments from current funds	
(b) Payments from sinking funds	
(c) Issue of new bonds	
104. Payments of interest on bonded indebtedness	
105. Payments to sinking funds	
106. Refunds of tax and tuition	
107. Other items	
108. Total expense of debt service, excluding items 103 (b) and (c)	

PAGE 6 (For Page 7 see Page 45).

a new standard form of accounting reports, applicable to cities of 100,000 or more population. This committee was composed of Eugene Nifenecker, director of Reference, research, and statistics, New York; W. W. Theisen, director

of reference and research, Cleveland; Murray Dalman, director of reference and research, Indianapolis, and the writer. A tentative report was developed and presented to the Inter-City Conference for approval. This was given

with the recommendation that a joint meeting be held with the National Association of School Business Officials at their annual convention.

A joint meeting of the research committee

of the Inter-City Conference, and the National Association of Public School Business Officials was arranged by President George Womrath in Detroit last May. Mr. H. R. Bonner, specialist in school statistics, represented the United States Bureau of Education. The outcome of this conference was the recommendation for a second joint meeting to be held in Washington.

The second conference was held in Washington in December 1921 with the following organizations represented: The Department of Superintendence, the Inter-City conference, the National Association of Public School Business Officials, and the United States Bureau of Education.

The Department of Superintendence and the Inter-City Conference were represented by Messrs. W. W. Theisen, Murray Dalman and Arthur B. Moehlman. Mr. Nifenecker was unable to be present. The National Association of Public School Business Officials was represented by William T. Keough, Boston, chairman; Arthur Kinkade, Decatur, Ill., William Dick, Philadelphia, Herbert N. Morse, Trenton, N. J., and Daniel D. Hammelbaugh, Harrisburg, Pa.

The Bureau of Education was represented by Commissioner J. J. Tigert, Mr. H. S. Bonner and Mr. W. S. Deffenbaugh.

Mr. William T. Keough of Boston, was elected chairman of the joint committee.

The report as developed by this joint committee was ordered printed and was presented to and approved by the Department of Superintendence at the 1922 meeting and will be reported to the National Association of Public School officials at its May, 1922 conference at Atlantic City. The Bureau of Education expects to make this report effective this year for cities of 100,000 or more population.

Changes were made in the method of reporting receipts and balances by providing the listing of cash balances and stock inventories in order that a full accounting might be made.

Administration.

A new item was added under administration to provide for the general control activities of co-ordinate activities and several of the older items divided. Administration was defined as that group of activities that deals with (1) the carrying out of policies that provide physical, financial and educational conditions under which pupil, teacher, principal, and supervisor may work to best advantage; (2) the provision of channels through which the course of study, general data and instructions may be quickly and effectively placed in operation; (3) the provision of channels through which information and conditions in the schools may be promptly transmitted to the central offices; (4) the putting into operation standards of achievement; (5) the preparation of general data and reports; (6) research activities; (7) general publicity.

Supervision.

Supervision was carefully defined as follows: General supervision of instruction shall be defined as that group of activities which has to do with the actual improvement of instruction through direct contact with principal or teacher, including activities as (1) preparation and development of courses of study and bulletins on method; (2) examination of textbooks; (3) demonstration teaching; (4) institutes and teacher's meetings for the improvement of instruction; (5) personal conferences for the interpretation of methods and curricula; (6) classroom visitation and inspection; (7) setting up standards of achievement.

It was also reorganized as to detail to secure a more perfect accounting of supervisory cost.

Instruction.

Instruction reports were developed in greater detail. Provision was made for the inclusion of the intermediate or junior high school, and vocational activities. Special class activities were further sub-divided according to type.

Coordinate Activities.

A new division was established to care for certain activities which some cities have been charging to administration, others to instruction and still others to auxiliary agencies. These include the field service activities of attendance law enforcement, medical inspection, dental inspection and nurse service, sub-divided according to activity.

Auxiliary Agencies.

The number of items classified under this head were reduced by removing medical and health service. New items relating to school banks, gardens, and lunchrooms were included.

Fixed Charges.

The method of reporting Fixed Charges was changed to secure these by school division.

Operation of School Plant.

The method of reporting these items was changed as to detail.

Maintenance of School Plant.

The method of reporting these items was changed as to detail.

Capital Outlay.

Capital Outlay was revised to show cost classifications in greater detail.

Balance Sheet.

A condensed balance sheet was included, together with a summary of expenditures by which the proportionate amounts spent upon the several maintenance divisions can be seen at a glance.

Other Items.

Practically no changes were made in reports on the value of school property, bonds and sinking funds, taxation and debt service, except in developing more inclusive definitions.

Explanation of the Principal Items and Headings.

The general statistics of city school systems are to be supplied by the city superintendent of schools on the blank designated as Part I. The fiscal statistics should be reported in this blank known as Part II and are to be supplied by the chief fiscal officer in the school system. The superintendent and the fiscal officer should compare their statistics before the reports are transmitted to the Bureau of Education. Such comparison will result in harmonious reports. This comparison is necessary to insure, for example, that the two officers shall consider the same persons as supervisors, teachers, etc., in reporting the number of such persons or the salaries paid. A mutual understanding should prevail as to which schools in the system are to be reported as kindergartens, elementary schools, special schools, junior high schools, etc.

A. Receipts.

1. **Revenue receipts (items 1-9, inclusive).**—Report as revenue receipts all receipts which do not result in increasing school indebtedness or in the depletion of school property. Revenue receipts will include, therefore, all moneys derived from the sources indicated in items 1-9, inclusive. All revenue receipts should be net.

2. **Federal moneys.**—Under this heading and after item 4 report the amount of money received from the Federal Government for vocational education from the Smith-Hughes Fund.

3. **State moneys.**—"State moneys" includes all school revenue paid into the State treasury and distributed therefrom on a different basis from that on which it was collected, i. e., the city usually receives an amount either greater or less than the amount paid by the city to the State. In many cities it will not be possible to distribute the total amount of money received from the State so as to show the different sources from which such moneys were received by the State, as indicated in items 1-9. In such cases report the total amount received from the State in the "State moneys" column after "Total revenue receipts."

4. **County moneys.**—Include all school revenue raised by the county, which is turned over to the city for the support of the city schools. In States having the county unit of taxation, all moneys received from county sources should be reported in the column for county moneys.

5. **Township, district and municipal moneys.**—Include all moneys collected directly from the city and all revenue accruing to the city school system from the township, district, or town ("town" is used here in the sense of a school district, not a village or small city) in which the city is located or of which the city forms a part.

6. **Income from permanent funds.**—This item includes all income from permanent invested funds, exclusive of invested moneys designed to meet future bond obligations. The interest accruing from invested sinking funds should be reported after item 9. It is important that income from invested permanent county funds be reported under "county."

7. **Income from leases of school lands.**—Include only the income from school lands which have been set apart for a partial support of the school system. Do not include temporary rents from city school lots, as such income should be reported under item 9.

8. **General appropriations.**—This item includes appropriations distributed annually by the State or county on some per capita basis for school purposes but not for some specific educational activity.

9. **Specific appropriations.**—This item includes moneys appropriated by the Federal Government, State, or county for some specific purpose such as vocational education, high school aid, teacher training, education of the handicapped, etc.

10. **Emergency appropriations.**—After this item report any moneys appropriated from any political unit to meet emergencies, such as appropriations from the State to supplement teachers' salaries or from the general city treasury to increase the money available for municipal school purposes.

11. **Taxation for maintenance.**—Include all moneys raised by local (i. e. township, district, or city) taxation on personal property or real estate, on public and private utilities, from business taxes, and from poll taxes, for school maintenance purposes only. All moneys raised by State school and county school taxation which are transferred to the city school fund should be included here. The relationship of this item to section G of this blank is highly important. Specific school taxes should be carefully distinguished from appropriations which may be allotted to the city for school purposes but which have not been specifically collected as school taxes. Item 6 should include only the taxes raised for meeting the current expenses of the school system and the taxes collected for the construction of school buildings.

12. **Taxation for debt service.**—Include here all moneys raised for meeting debt obligations, such as the accumulation of a sinking fund, payment of interest on bonded indebtedness, and interest in short time loans.

13. **From other school districts for tuition.**—This item includes all school moneys transferred from one local school unit to another. It will generally include only tuition money (not tuition from patrons), but may include also money received from another school unit for various purposes. The money thus transferred must be eliminated from the final State report to the United States Bureau of Education in order to avoid a duplication of receipts and expenditures. It is very important, therefore, that transfer money be separated from other receipts.

14. **All other revenue receipts.**—Include all fines and penalties, all gifts, bequests, and contributions to the city schools, all receipts from the rent of school buildings and school lots (not school lands in the sense of a permanent investment), all interest on bank deposits and invested sinking funds, and all tuition fees paid by school patrons (not tuition money transferred from one district or city to another).

This item should include any excess in the selling price of textbooks and supplies to pupils or other persons over the cost. It should include also the profit accruing from lunch rooms carried on with school funds. Net admission receipts from public entertainments should also be included.

15. **Non-revenue receipts.**—Non-revenue receipts should include all amounts obtained from loans and bond sales and from the sales of property and supplies. All such receipts either incur indebtedness, which must be paid at some future date, or result in decreasing the amount and value of the school property. All non-revenue receipts should be net.

16. **Receipts from loans and bond sales.**—Include all receipts from bond sales negotiated during the fiscal year and all short-term loans

C—Condensed Balance Sheet			
Receipts and Opening Inventories		Expenditures and Closing Inventories	
1. Cash receipts (revenue and non-revenue)	\$	5. Total expenditures, excluding items 103, (b) and (c)	\$
2. Cash on hand from previous fiscal year	\$	6. Cash on hand at end of fiscal year	\$
3. Stock on hand from previous fiscal year	\$	7. Stock on hand at end of fiscal year	\$
4. Totals	\$	8. Totals	\$

D—Summary of Expenditures			
Function of Expense	Amount	Per cent of Maintenance Fund	
1. General control	\$		
2. Instruction	\$		
3. Co-ordinate activities	\$		
4. Auxiliary agencies	\$		
5. Plant charges	\$		
6. Operation of school plant	\$		
7. Maintenance of school plant	\$		
8. Total maintenance (items 1 to 7 inclusive)	\$	100%	
9. Capital outlay	\$		
10. Debt service, excluding items 103 (b) and (c)	\$		
11. Grand total expenditures	\$		

E—Value of School Property			
	Value of Site and Buildings	Value of Equipment	Total
1. General control	\$	\$	\$
2. Elementary school	\$	\$	\$
3. Special schools	\$	\$	\$
4. Intermediate or junior high schools	\$	\$	\$
5. High schools, including technical and commercial high schools	\$	\$	\$
6. Vocational, trade and continuation schools	\$	\$	\$
7. Normal schools	\$	\$	\$
8. Colleges	\$	\$	\$
9. Total value school property	\$	\$	\$

F—Bonds and Sinking Funds	
1. School bonds outstanding	\$
2. Other forms of debt	\$
3. Total amount now in sinking funds	\$

G—Taxation	
1. School tax rate for maintenance purposes:	
(a) State, if separate tax is levied for school purposes	
(b) County	
(c) Local	
2. School tax rate for other purposes, including debt service	
3. Assessed valuation of property taxed for school purposes	
4. Estimated percentage assessed valuation is of the true property value	

PAGE 7. CONCLUSION OF REPORT.

which were not paid during the fiscal year. It may sometimes be necessary to borrow money to maintain the schools until taxes are collected. These short-term loans, the payment of which does not carry over into the next fiscal year, should not be reported.

17. Receipts from sales of property and proceeds of insurance adjustments.—Include all moneys received from the sale of school buildings and grounds, sale of library books, furniture, scientific apparatus, automobiles, trucks, machinery, fuel, or other property belonging to the city school system. Include also the proceeds of insurance adjustments. Receipts from the sale of textbooks purchased during the school year are duplicates and should not be included.

18. Other non-revenue receipts.—Include all other receipts derived by decreasing the value of

the school property or by obligating the school system to make payment at some future time.

19. Cash Balance on hand.—Include balances from both revenue and non-revenue receipts.

20. Stock on hand.—Include all stock room supplies and textbooks which have not yet been distributed to the various school buildings for use.

B. Payments.

1. Definition of Administration or General Control.—Administration or general control shall be defined as that group of activities that deals with (1) the carrying out of policies that provide physical, financial and educational conditions under which pupil, teacher, principal and supervisor may work to best advantage; (2) the provision of channels through which the course of study, general data and instructions may be quickly and effectively placed in opera-

tion; (3) the provision of channels through which information and conditions in the schools may be properly transmitted to the central offices; (4) putting into operation standards of achievement; (5) the preparation of general data and reports; (6) research activities; (7) general publicity.

2. Board of Education and Secretary's office.—Under this head should be included all expenditures for salaries of members of school boards, of secretaries, and of other officers or assistants engaged in the business administration, and all other expenditures for such officers for supplies, traveling expenses, etc.

3. Officers in charge of buildings.—Include the salaries and expenses of those having charge of the construction and maintenance of physical properties, such as superintendents of buildings, school architects, inspector of buildings, superintendent of repairs and schoolhouse commission. Payments to special employees engaged exclusively on new work should be charged to outlays.

4. Officers in charge of supplies.—Include the salaries and expenses of the superintendent of supplies, business manager, or other officers whose duties are concerned with the purchase and distribution of supplies.

5. Operation and maintenance of administration building.—Include also rents paid for general control offices.

6. Superintendents of schools and their offices.—Include all payments for salaries of superintendents, assistant or deputy superintendents, directors of research, and other subordinate administrative officers whose duties are largely administrative and who are not primarily supervisors of instruction; for office assistants, clerks, and stenographers; for stationery, postage, supplies, traveling expenses, printing, and other miscellaneous expenses in connection with the office of the superintendent.

7. Administration of vocational relations and school census.—Include salaries and expenses of officers in charge of procuring vocational information, of giving vocational guidance, and of issuing working permits, and of census enumerators, including clerical help, necessary blanks, and other supplies, car fare, etc.

8. Administration of co-ordinate activities.—This includes payments for all salaries and expenses of persons who are in the central office exercising direct control of all the co-ordinate activities as specified in Section B III. Do not include field workers.

When personal bonds are required of school officers and are paid for by the city school board, such expenditures should be entered here.

B-II. Instruction.

9. Instruction.—This includes a statement of all items of expense concerned directly in actual teaching or aiding in the teaching of children, or improving the quality of teaching, such as salaries and expenses of supervisors and principals, teachers' salaries, expenses of teachers' institutes, cost of textbooks, school library books, stationery, and other supplies used in instruction.

(Continued on Page 121)

Cutting Consolidated School Costs

Superintendent L. E. Castle, Albert City, Iowa

This study is part of an attempt to solve an actual problem in the administration of the Albert City Consolidated School. We are face to face with an overwhelming demand for retrenchment. Since this problem is being met by every other consolidated school in the state, our conclusions and methods may be useful. We must agree that the farmer of the middle west is justified in his demand for lower taxes. But since the more far-reaching solutions of this problem are slow in coming into operation, many boards believe that the only way they can lower the millage of their district is by indiscriminate cutting of the salary schedule and in some cases of reducing the length of the school year.

It behooves every superintendent at this time to find where his greatest costs are and then to get down and do some mighty hard thinking to discover where he can help his board retrench at the right spot, namely, where

it will not injure the present or future usefulness of the school. School boards in small districts have always worked in the dark in matters of finance. Their job is to turn the taxpayers' money into educational opportunity for the youth of the district. However, they have always been kept in ignorance of how much "education" the school dollar actually bought, simply because nobody else knew much about it either. Besides this, they have not known in the vaguest degree how their school compared with others of its size and kind.

Admitting the danger of following the comparative method blindly, we believe it is necessary to know something of the central tendency in school expenditures before we can know whether we are progressing at all. We must discover in what part of the procession we are marching in order to lay our plans for getting into the front rank.

In addition to knowing his costs and how they compare with schools of the same size and type, the superintendent must use every means of placing before his tax-paying patrons the work the school is doing. Never before did we need to "sell" the school to the patrons as now. A yearly report showing progress measured by standard tests, and showing graphically the results of better organization if such has been accomplished, should be put out for patrons on the mimeograph. This report should describe the parts of the school work which are especially well worth while this year. The careful work most schools are doing in speed and accuracy in the fundamental operations, progress in handwriting on the Ayres scale, and in oral and silent reading tests, appeals to almost any citizen if rightly presented. Use graphs freely, but simply. Don't put more than one thing into a graph. Besides this report, use the local paper. Sell your policy, piece by piece. Seize

every opportunity to talk on some one phase of school work which will appeal. Seek out the tax grumblers and interest them in the work of the school. Get them into your office. Have a visiting day and get patrons into the rooms. Praise your good teachers and let them see the work. Sell your school.

We superintendents have too long followed the policy of trying to work the board so far as possible for more money and then leave them to answer to the taxpayers as best they could, while we gave them no information to "answer" with. Now that the cry for retrenchment has come it is time for us to get down and earn the part of our salaries which has been paid for administration by helping the board carry the school through to better times. At Albert City we have planned to cut expenses in several ways. First, we figured the cost per pupil of every study in high school. It costs our school \$73.72 per pupil for all expenses of operation except teachers' salaries and special equipment. Divide this by eight, the number of periods in the high school day, and you have \$9.21, the cost of operation per pupil for each high school class for the entire year. Add to this the cost of the teacher's time divided by the number of the pupils in the class, and you have the cost per pupil of instruction in that particular class for the current year. Our costs for each class are given in Graph I, for the year 1921-1922. Manual training, second year Latin, plane geometry, second year English, and first year algebra all have a very high cost per pupil because the classes are so small. The cost of a teacher's time in the assembly room was also an important item. By alternating elective studies in the two upper grades where the enrollment was small enough, so as to give them every other year to capacity classes, and increasing the capacity of our manual training room, at a cost of \$200, our average cost per pupil, will be cut 35%, the cost of each class per pupil appearing as in Graph II. A comparison of the two graphs will show the reduction in pupil cost. By reorganizing the course in this way, and by using student monitors in some of the assembly periods we are able to get along with one less teacher in the high school, in spite of an enrollment increase of approximately fifteen per cent. Our curriculum will not suffer by the change, as many electives being available for each child before graduation as before.

Making a Budget.

After planning the work of the year, it was "translated" into terms of dollars and cents before being presented to the board. In other words, the superintendent embodied his entire policy in a budget. Consultation with the secretary and members of the board were necessary to determine many of the items, but once the budget was finished and accepted by the Board, the superintendent was expected to assume responsibility that it was not over-run throughout the year. During this year, at each board meeting the superintendent has made it a point to be able to inform the board as to just how much had been spent under each item of the budget, and how much is still on hand. A card for each item, debited at the first of the year with the amount allotted to that item, and credited each time a warrant is issued by the secretary, is a time-saving method for the superintendent to keep this information, so that it will be ready at all times. Each month before the Board meets each card may be balanced, showing the amount still on hand.

Comparing With State Medians.

After planning the budget, each item was compared with the median expenditure per pupil for that item in one hundred consolidated schools of the state for the current year, to see

COST PER PUPIL OF HIGH SCHOOL SUBJECTS ALBERT CITY 1922-23

	No. in class	Cost per pupil	Each star = One Dollar
Home Economics.....	(12)	\$30.83	*****
Manual Training.....	(18)	\$30.46	*****
Physics.....	(17)	\$28.06	*****
U. S. History.....	(13)	\$27.70	*****
Agriculture.....	(23)	\$21.03	*****
Economics.....	(16)	\$20.54	*****
English 1st Yr.....	(22)	\$18.30	*****
Adv. Alg.—Arith.....	(20)	\$17.96	*****
English 2nd Yr.....	(23)	\$17.91	*****
English 3-4th Yr.....	(23)	\$17.91	*****
Algebra.....	(22)	\$17.17	*****
Modern History.....	(23)	\$16.82	*****
Commercial Law.....	(20)	\$16.21	*****
Pub. Speaking.....			

COST PER PUPIL OF HIGH SCHOOL SUBJECTS ALBERT CITY 1921-22

	No. in class	Cost per pupil	Each star = One Dollar
Manual Training.....	(7)	\$63.86	*****
Agriculture.....	(9)	\$39.63	*****
Latin, 2nd Yr.....	(7)	\$38.78	*****
Physics.....	(13)	\$37.39	*****
Biology.....	(12)	\$32.73	*****
Plane Geometry.....	(10)	\$31.09	*****
Home Economics.....	(12)	\$30.83	*****
English 2nd Yr.....	(7)	\$29.21	*****
Latin 1st. Yr.....	(11)	\$27.39	*****
Algebra 1st. Yr.....	(9)	\$24.09	*****
U. S. History.....	(18)	\$22.55	*****
Economics.....	(14)	\$22.16	*****
English 3-4th Yr.....	(21)	\$18.74	*****
General Science.....	(23)	\$18.53	*****
Modern History.....	(20)	\$17.96	*****
English 1st. Yr.....	(23)	\$17.91	*****

GRAPH 1.

if our plans for the year were reasonable, and comparison was also made on the basis of percentage distribution of the total among the various items, to see if our plan was well proportioned. The medians used were obtained by sending a questionnaire to 350 consolidated schools in Iowa on Feb. 27, 1922, from which about 150 replies were received. The first hundred replies which reached us were tabulated, and the results mailed back to each school on March 13. Graph III, showing the median for each item in dollars per pupil, and Graph IV showing medians in percentage distribution were also sent, with directions for comparing each school with the medians. Since this may be of interest to other schools, the graphs and directions for comparison are included here. The running expenses for the year were divided into seven items, as follows:

1. Administration; salaries of superintendent, office assistants, secretary of the board, other expenses of the board, but NOT the salaries of principals or supervisors.
2. Teaching or Instruction; salaries of teachers, supervisors and principals, textbooks, all supplies used in instruction and any expense which has to do with teaching children in class.
3. Operation; includes janitor's salary and helpers, fuel, water, light and power, janitor's supplies and all expenses needed to operate the plant.
4. Maintenance; includes all items that tend to make the plant as good as it was at the beginning of the school year, such as repairs, painting, replacement of equipment and upkeep of grounds.
5. Auxiliary Agencies; includes library, health work, lunches, lectures and social center work, and all other items which cannot be included elsewhere.

6. Fixed Charges; rent and insurance.
7. Transportation; including all expense of keeping vehicles running for the year, including salaries, repairs of busses, etc.

Besides the items given as running expense, three others, new equipment not bought to replace old, debt service including interest and sinking funds, and payments on buildings and sites, were included in the questionnaire, but these are not included in the comparisons for obvious reasons. The headings here followed are taken with slight alterations from a "Survey of Iowa School Finance," by Russell and Lindsay, University of Iowa Extension Bulletin 1921.

If you wish to compare your school with the medians in dollars per pupil, divide each item by the number of pupils, using for "number of pupils" the figure halfway between your total enrollment and your average attendance for the first semester of 1921-22. Check the amounts on the chart here given or reproduce the graphs with your own amount represented by a paragraph alongside the median bar.

If you wish to compare your school with medians as to the manner of distributing the funds among the various items, total your seven items and divide each of the seven by the total for all to find what percent of the total your plan apportions to each. Check your percents on Graph IV.

Interpreting the Budget Medians.

The median represents central tendency. One half the schools are higher and one half lower than the median. One fourth of the schools lie below the first quartile. One fourth lie above the third quartile. The middle fifty percent lie between the quartiles.

If you have an item outside the quartile lines you should at once investigate and find the reason you are distributing your school tax in a different manner from three-fourths of the hundred schools reporting.

If you are paying more than the median for instruction, administration and auxiliary agencies, your school is or should be doing work above the average, for this is where the money should go to produce results educationally. If these items are low you are administering wrongly. If you are managing to keep your operation, maintenance and fixed charges below the median, without detriment to health and sanitation or endangering of property, so much the better. You will then have more money for the former items.

Conclusions.

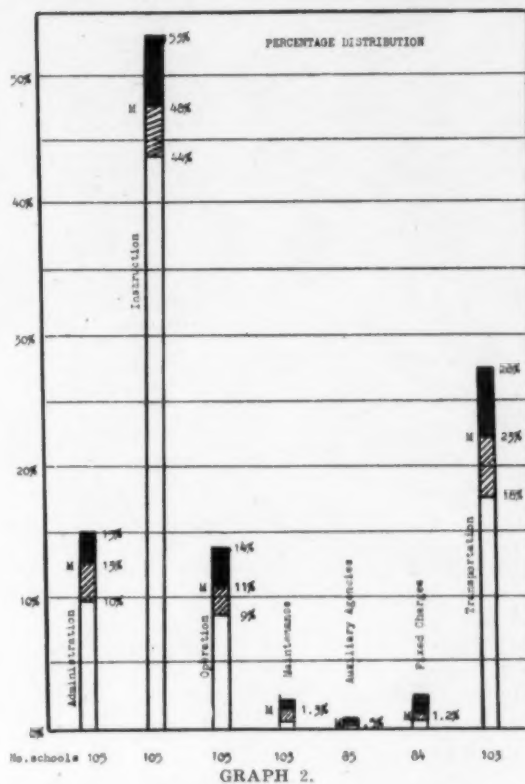
Let me sum up the conclusions we have reached at Albert City.

1. Some retrenchment is necessary in school expense, if it can be accomplished without sacrificing the efficiency of the school thus far gained.

2. It is "up to" the superintendent to find out where greatest costs lie, and whether these costs can be cut without injuring the school. He should stand responsible for finding where retrenchment is to take place, subject to the final approval of the board.

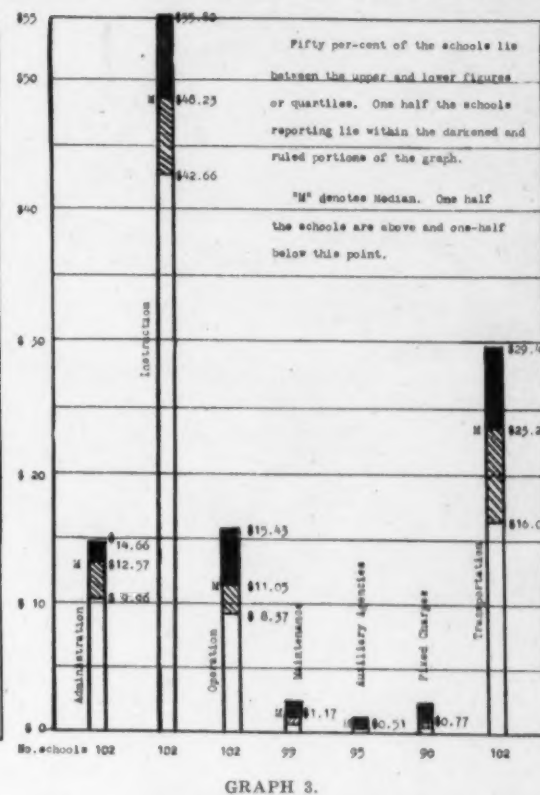
3. Publicity is more necessary this year than ever before to sell the good work of the schools to the tax-paying public, and the superintendent

HOW 105 IOWA CONSOLIDATED SCHOOLS DISTRIBUTE THEIR EXPENSE - 1921-1922.



GRAPH 2.

DOLLARS PER PUPIL - 108 CONSOLIDATED SCHOOLS IN IOWA - 1921-1922.



GRAPH 3.

is the man hired to handle the bulk of this publicity.

4. Salary cutting should be the last resort.

The superintendent who cannot help his board cut costs anywhere but on teachers' salaries deserves a liberal cut himself.

Your Local Paper as a Factor in School Administration

Stuart R. Paddock, Editor Cook County, Ill., Herald and Palatine, Ill., Enterprise

How many of you school boards use your home town paper as an aid in your administration of school affairs. From my own personal experience as a country editor I will venture to say that there are more of you who don't use the local paper than there are those who do. Of course every newspaper man believes in publicity—that's natural, because we make our living in the publicity game. But the sort of publicity that we country newspaper men, or in fact any newspaper men, make any money on is advertising, and I am not going to try to sell any school board any advertising space in this article. I am simply going to urge you to make use of what is the best sort of free advertising obtainable: the news column of your local paper.

Of course every local paper always carries more or less school publicity about school entertainments, graduating exercises and the like, but what I want to suggest is that more school boards make use of the news columns of their local papers to get in closer touch with the public and acquaint the public through the columns of your local paper with some of the many problems which confront you in your administration of school affairs.

An Unfair Attitude.

A great many school boards, I am sorry to say, seem to think that the best way to do is to say as little as possible about school problems outside of board meetings. Now I think that attitude is not fair to the general public and particularly to the taxpayers who are in reality the ones who support the school and pay for its maintenance. The question of school taxation is a vital question in every community and it is a question with which every school board is forced to wrestle all the time.

It has been my experience that the most kicking at tax time about school taxes has been done in communities where the average taxpayer knew little or nothing about the problems with which the school boards had to contend. While in communities where the school problems and their effect upon taxation were frequently aired through the columns of the home paper, there was little or no complaint from the taxpayers because they had been made acquainted with what the school problems were and knew about what to expect in the way of taxation.

In the territory served by the papers of which I am the editor, I have seen striking examples of both kinds of school administration, the kind which keeps all the problems shut up in the board room and the kind which gives them the widest possible publicity through the columns of the local paper, and I want to say most emphatically that the communities where the public is taken into the confidence of the board and where school problems are freely and frankly discussed through the press are the communities that have the most progressive schools and are the communities where the general public takes the most active interest in those schools.

The Danger of Lack of Information.

School affairs are affairs in which altogether too often the average citizen is not interested. He isn't interested until something comes up that forcibly compels his interest, for instance that the school has become too crowded and more buildings are necessary, or the school grounds have become too small and more playground is needed. To bring about these necessary improvements means an increase in taxation and when the news breaks that some such

action is needed there is a sudden and very often a hostile interest taken in school affairs by Mr. Average Citizen who ordinarily gives the school little thought, no thought at all most likely, except to think what it's costing him in taxes.

Now when a sudden problem is sprung at the average taxpayer he is likely to back up and put himself on the defensive. He will maintain that defensive attitude and "show me" sort of spirit until you can convince him that whatever is needed is absolutely necessary, and if he hasn't heard anything about the proposition previously to its being suddenly brought up it is going to take a whole lot longer time to get him to see things your way and vote to increase his school taxes to pay for the needed improvements than it would take if the proposition had been openly and freely discussed through the press from the time when the necessity of some action was first seen by the school board.

One day on a railroad train I heard a couple of farmers excitedly whispering about some news they had just heard. It was stated that the new high school voted in their district could not be built because the supreme court of the state had declared the election illegal. Now as a matter of fact there was no question as to the legality of the election, the supreme court decision being on an entirely different matter about the boundaries of the district. The next day the president of the school board came out in our paper with a clear and complete statement of the whole affair and all the wild rumors were stopped before they got fairly started. That prompt action on the part of the school board in taking the entire public into confidence and telling them all that they knew themselves stopped a lot of foolish talk. True facts

made public will win where secrecy means whispered stories that may bring catastrophe.

A Salary Snarl.

Some school boards even object to letting the public know what salaries they are paying their teachers, giving as the reason for secrecy in one case I recall, that the members didn't want the teachers themselves to know what the others were getting. Now it's a safe bet that there are not many schools where each teacher doesn't know what the others get, and in this particular case it didn't help the board any to keep things under cover because the board in an adjoining district, in making public the salaries they were paying also made public those of some near-by districts as a means of comparison to show that other boards were paying more than they were. Of course some one from the first district saw the neighboring paper, and then the board that had kept quiet was forced to make all manner of explanation as to why they were paying more than the other fellows. If they had made all those explanations at first it would have been a lot more convincing and would have saved them considerable unfavorable comment.

I know one school board that conducts a regular campaign of publicity on everything of importance that comes up. They give the people an idea of school organization, the conditions which affect schools as well as other institutions regarding salaries etc., the laws of governing taxation and in short everything which they think would be of interest to the general public. "Those things interest our board and we are merely the people's representatives in school affairs. Why shouldn't they interest the general public whom we represent?" is the argument of that school board.

The Childless Taxpayer

Of course people who have children in school are always interested in the school, but it very frequently happens that the great majority of taxation falls upon people who do not have children in school. It is these people who are reached by a publicity campaign which stresses the school as not only the place where the children are educated but as the place where the future citizenship of America is being formed. If the taxpayer who is not a patron of the school can be made into a friend of the institution, one big step has been taken toward better education. And the best way, and in fact practically the only way, in which these tax paying non-patrons of the school can be reached is by keeping the school and what it means as a community institution constantly before them through the columns of the local paper.

Another way in which the local paper can be used to keep the importance of the school to the community before the public is to show the tax payers how much a good school really means to the community in dollars and cents. Every locality which boasts of good schools can also boast of higher property values than can a community which does not have such good schools. An article showing values of property in a good school district as compared with values in a district which has not as advanced schools is one which wins friends for the school.

A Profitable Tax.

A district in territory served by one of my papers has a fine four year high school. This school cost the taxpayers of that district about \$9,000 last year and they were educating about 50 pupils. A neighboring district which had no high school had to pay \$3,000 non-high-school tax to help educate children from the non-high-school territory of the state, who attended high schools in organized districts. No children from this particular district attended high school so the taxpayers were paying a

\$3,000 school tax and really getting no direct return. The board of education in the neighboring organized high school district took immediate advantage of this situation and ran an article in my paper showing that while their district had spent \$9,000 to the other district's \$3,000 in high school taxes they had gotten the advantage of educating 50 children. In other words for three times the amount of money paid in taxes they had got fifty times the return in education. That article was good publicity and made a great hit with the people who were maintaining the fine high school. It didn't set so well of course in the district where they were paying \$3,000 in taxes and getting nothing.

Editors Are Human.

I am sorry to say that some school boards seem to think that when an editor of the local paper comes around looking for news of school affairs he should be regarded as some sort of a pest and be gotten rid of as quickly as possible and with as little news about school affairs as it is possible to give him. It is my honest opinion that a board which does that is simply laying up future trouble for themselves. For editors of local papers are only human beings and as such they like to be treated well. The members of a school board who do treat the newspaper man well and give him news freely is going to find that newspaper man their

"FOURTEEN POINTS" FOR TEACHERS.

Supt. Paul Dillingham, Litchfield, Conn.

1. Your school is good only in so far as it is growing better every day.
2. Remember that you are teaching children, not subjects.
3. Be more of a guide and leader than task-maker.
4. Don't be a supplement to the textbook, make the textbook a supplement to you.
5. It is more important to get pupils to like a subject than to learn facts.
6. Anticipate the situation. Most disciplinary troubles arise through lack of foresight on the part of the teacher.
7. Have your work for the day planned in detail.
8. Keep things moving: avoid drag.
9. Grammar should be taught by use, not by the yard.
10. Make every subject a lesson in good English.
11. Develop community spirit in your pupils by being a community leader yourself.
12. If you are using some device or method that brings results, pass it along.
13. Keep the public informed of what your school is doing. This is an age of advertising and schools are no exception.
14. Enthusiasm is contagious. Be enthusiastic.



THOMAS R. COLE,
Superintendent of Schools-Elect,
Seattle, Wash.

friend when they need a friend. On the other hand if he is treated indifferently and as if he were some sort of a pest, he is likely to remember it and not give that board all the willing support they think they ought to have when the time comes that they need publicity and want it badly.

Some school boards think that the least said about the schools by the public the better; other boards think that the more the schools are kept before the public the better it is for both the public and the school. Naturally, as a newspaper man, I agree heartily with this latter view. I believe in publicity in all public affairs but particularly in school affairs. There may be times when premature publicity may be harmful to certain national or international issues, but with our schools it is different. Every school is a local affair, a community proposition. Every school, big or little, holds a vital place in the affairs and the welfare of the community which it serves, and I can see no earthly reason why the problems of the school should not be fully and freely discussed by the school board and the public. I believe that such full and free discussion is the best way to assure real harmony and promote increased efficiency in the school.

Publicity Insures Support.

My experience as an editor has fully convinced me that there is a great deal of value to the school board, to the school and to the community in a policy of open publicity on the part of boards of education. I have seen in the territory served by my papers striking examples of the open-door and of the closed-door policy. I want to say emphatically that where you find the best schools and where you find the people of all classes interested in those schools, you will also find the policy of the boards is the open-door policy and that complete publicity on all vital school problems is given out to the general public.

Now folks, I am not trying to sell any of you any advertising in any of my papers. Most of you who read this would be outside of the territory served by those papers, anyway, but even if you were all within range of my publications I wouldn't try to sell you advertising space. All I want you to do is to consider whether or not you are using your own local paper for all that it's worth to help you in the administration of your school affairs.

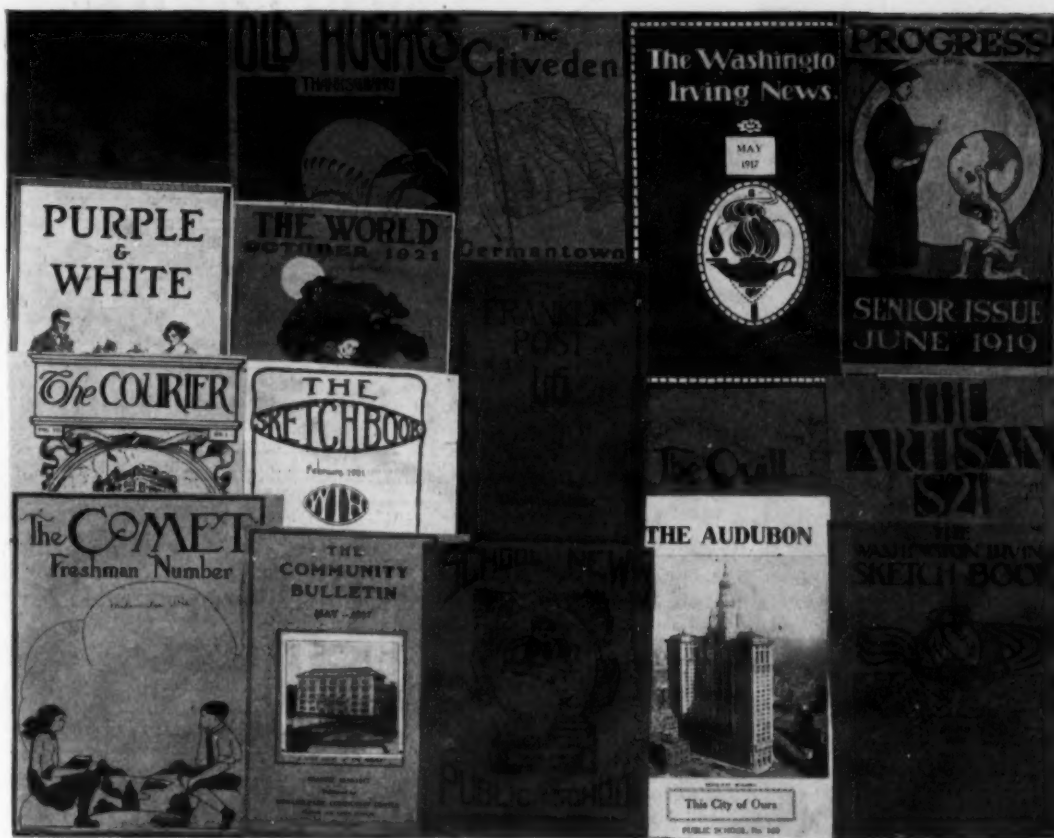
The "home town" papers of this country carry a mighty weight in their respective territories, the editors are a likable constructive, and useful bunch of fellows who are always ready to give home enterprises an enthusiastic boost. We are always looking for news and the columns of our papers are always open for any worth-while article on a worthy cause, and if there is a worthy cause in this country the American public school is one. It has been a sort of "side issue", "necessary evil" sort of a thing for altogether too long among the taxpayers of some localities.

Wake the public up, let them know what the school is and what it stands for and what it means to America. School boards in too many cases are trying to solve the weighty problems of the school alone. The school problems are problems for all of the people. Take the people into confidence and tell them what your difficulties are, what are your purposes and plans. The best way to reach the general public is through the columns of your local paper. Use those columns. The local paper can be a big help in your administration of school affairs if you will only allow it to be so, and we editors are always ready and willing to help a good cause along.

Dr. Edward W. Stitt, District Superintendent of Schools, New York City

Assuming Editorial Management.

A matter which will need early attention is to decide how often the publication shall appear.



COVER DESIGNS OF VARIOUS STUDENTS' SCHOOL PERIODICALS.

The Selection of a Name.

In choosing a name for a school paper, such a name should be selected as can be represented by a cover paper design. Names in the above group lending themselves to this form of treatment are The Owl, The Bull-dog, Our School (picture of Building,) Happy Days in—.

Competitive Cover Designs.

Circulation and Advertising.

The most satisfactory and effective plan for securing the advertisements, is to appoint a number of accredited agents in the school to act as solicitors, and pay them about ten per

cent of the amount received. This will be a practical illustration of the commission received by an agent, and will help the pupil to realize concretely just what is meant by "net proceeds". Each pupil should be held responsible for the collection of the money, so that there will be few bad debts, as the pupils will usually secure the ads from their personal friends, or from the merchants with whom the parents have business relations.

To avoid possible criticism, it will be well to scrutinize carefully all advertisements, and reject those that may be of doubtful propriety.

Employment of Illustrations.

The matter of illustrations is an important one. As the school paper is necessarily to appeal to young readers, there should be some attempt to have pictures diversify what will otherwise be solid reading matter. It will sometimes be easy to secure the loan of half-tone cuts from publishers, if due acknowledgment be made for the courtesy. Some of the smaller towns and cities maintain a "Publicity Bureau," and this furnishes a medium from which to borrow pictures of prominent local buildings, parks, monuments, and schoolhouses. It will also be well to make a feature of printing half-tone photographs of the principal, some of the teachers, members of the board of education, or the officials in charge of the school. If the baseball team has won a trophy, the pictures of the boys who won the prize award, will add much to the summer number and help to make it a good seller. Advertisers will usually lend their assistance to a school-paper which is well illustrated, because they know it becomes a treasured souvenir in the home, and is carefully preserved and not thrown away after being read, as is the ordinary newspaper.

A careful examination of many excellent school papers published in different towns and cities shows a wide variety in the pictures which have been reproduced to enliven the paper, and makes it, as most magazines are today, illustrated. Some of the subjects which have been frequently employed, and which therefore can be recommended for imitation are the following: The School Building, Our Mayor, President of the Board of Education, Our Superintendent of Schools, Our Principal, Our Faculty, Track Team, Honor Pupils, Snap Shots of Field Day, Board of Editors, Class Officers, Flag Day Exercises, Our Orchestra, Camera Club, Our Oldest Graduate, Our Champion Athletes, The Workshop, Our School Garden, The Dental Clinic, Guardians of the Peace (School Patrol), Our Kitchen, Our Star Graduates, Basket Ball Champions, Graduates of 1920, Our Assembly, Class Presidents, Our School Banner, Within Our Gates, Liberty Loan Parade, Stand by Our Flag, Our Glee Club, Our Color Guard, First Aid Club, Folk Dancing Club, Games in the Kindergarten, Our Dramatic Club, Arbor Day Exercises, Saluting the Flag, Our Red Cross Club, Some Distinguished Graduates.

Attractive Features.

A prominent feature of each issue should be the publication of the "Honor Roll" of the school. This should include not only the names of the best pupil in such class, but also the names of those who have especially distinguished themselves during the previous month in any of the various branches of schoolwork. Not only are the pupils pleased by such a recognition of their good work, but the parents are proud to see the evidence of their children's success. A pupil in one of the primary grades who sees his or her name in print in a real paper will be greatly stimulated to continue the meritorious work and will have increased interest in the school itself.

One very successful school paper published in New York, has a page entitled "With our

Babies," and contains bright sayings and original remarks which have been made by the children of the kindergarten. It includes also some characteristic pictures of children's games and occupations which are invaluable as showing the parents the kind of education the youngest pupils are receiving.

It will be advisable to devote one or more pages to "News of Our Alumni." This plan will not only serve to impress the members of the former graduating classes, but will inspire the present pupils of the school to increased devotion to its best interest. It may be possible to print photographs of some of the distinguished graduates. At least, it will be an easy matter to make mention of the success which has come to them in the various branches of professional or mercantile life. In all such cases, the year of their graduation is to be emphasized, in the hope that the notice may attract the attention of some other graduate of the same class. They should be willing to share in the financial side of the work.

If the first issue of the paper proves to be successful, the principal will doubtless receive many letters of congratulation from distinguished citizens or friends of the school. We have seen such a paper in which was printed a letter of approval from the governor of the

"Empire State." Mayors, congressmen, school superintendents, members of the board of education, and editors of influential metropolitan papers have sent such letters of commendation. Their publication not only vouches for success, but adds very materially to the available reading matter for the following issue.

The Element of Humor.

The "Department of Humor" should not be forgotten. In every school, there are many real happenings which are very funny, and their publication will add to the pleasure of the readers of the papers. If the incidents have happened in the classrooms, the names of the teachers concerned can be disguised as Mr. A. or Miss B., though it may frequently be all right to publish the name of the pupil who made the joke, or about whom the witticism is reported. Pupils should be encouraged to contribute funny occurrences, jokes, errors, and so forth. It is possible that some young cartoonist may be able to contribute a sketch or illustration.

In the making of a modern newspaper or magazine, it is probably very often necessary to pad the issue with extracts from other papers. In a school journal this will not be necessary. As a rule, if the editorial committee has been fully alive to its duty, there will generally be



TITLE PAGES OF STUDENTS' SCHOOL NEWSPAPERS PUBLISHED IN VARIOUS CITIES OF THE UNITED STATES.

an embarrassment of riches, and the task will be to weed out the poorest material.

It is not recommended that prizes be offered for the best compositions, as too often this will result in some young contributors receiving undue help at home, or in openly plagiarizing some article and sending it in as an original composition. The best plan is to limit all such material to those compositions which have been actually written in the school, in the presence of the class and the teacher. The pupils will be fully alive to the fairness of the work, and the publication of their best efforts will stimulate renewed interest in "English composition."

"School statistics" may be made to furnish an interesting page, and will not only include such items as the total attendance, registration and so forth, but may also include interesting facts regarding the average age of the various classes, cost of supplies per pupil, list of various nationalities represented, and other such topics. There should also be published the average per cent of punctuality and attendance obtained by the classes having the the best records. If the principal has made a test of several classes of a grade, mention may be made of the class having the highest mark, but the separate marks should never be printed.

In old established schools, and in residential neighborhoods, a valuable department can be made of the "parents' page." It can contain mention of successes which have come, and can record what has been done at the parents' meeting. It will be the medium for the plans which the parents are making for the purchase of a new school flag, pictures or casts for the assembly hall, and other such efforts to add to the decoration of the school building.

Exchanges and Special Issues.

Mention should be made of the valuable hints and suggestions which can be obtained from an examination of other school papers. It is therefore very necessary to keep up a fair amount of "exchanges," especially by papers published by schools in other cities, so as to become acquainted with what other good schools are doing. A "committee in exchanges" is recommended, whose duty shall be to report upon items of interest, innovations attempted elsewhere, and material worth reprinting.

In case there is a charge made for the paper, it should be a very moderate one so as to bring it within the reach of all the pupils. Once or twice a year, it may be found advisable to print a special issue, much larger than the ordinary, and this may be sold at a larger price. If possible, an effort should be made to secure a certain number of subscribers who will pledge to take the paper for the whole year. Very often, a former graduate will not only subscribe for himself, but will also pay for sending one or more copies to former school-mates who may live in different parts of the country. If possible, the advertisement may serve to pay the expenses of publication, and then the paper can be given to the pupils. The objections to this plan are first that there is often a lack of appreciation for that which is received gratis, and secondly, the money received from the circulation should serve to increase materially the financial stability of the enterprise. In any event, there must be an effort made to print a large number of copies, and have a bonafide circulation, as otherwise business men will be very unwilling to advertise.

In many schools, it is a long time before new pupils are fully assimilated. By the aid of the school paper, they are quickly introduced into the various activities of the school. The school-pride, school-color, school-song, school-motto,

etc., will receive excellent business experience.

(5) The co-operation of former graduates will help to continue their interest in the school they attended as pupils.

(6) If a new building is needed, the journal can do excellent publicity work in that direction.

(7) It becomes a strong factor in uniting more closely school and home.

(8) If properly managed, there will be a satisfactory surplus which can be devoted to school purposes, athletics, mural decoration, etc.

(9) The pupils will be glad to save the successive issues which thus become valuable souvenirs of their school days.

(10) The general plan is a most valuable training for a pupil who may later wish to enter journalism as a profession. He may become the President Harding of the future!

THE TEACHER IN THE POLICE COURT.

There is an occasional reaction to the liberal spirit which the schools of the nation have adopted in the matter of school discipline. Corporal punishment has been reduced to a minimum, and properly so.

But, where parents fail to maintain child discipline in the home the school is likely at times to be confronted with an embarrassing situation. There are incorrigibles who will yield neither to persuasion nor to the sobering effects of forcible restraint. The rod here is frequently the most effective and only corrective which the wilful child respects. The temptation of the teacher to bring the recalcitrant youth to his sober senses and to confer a blessing upon him by resorting to a wholesale trouncing, may become irresistible.

But, there is the lax and sympathetic parent. Johnnie's version of the encounter is accepted. Brutality has been practiced. The police courts are created for a purpose. The teacher, rather than Johnnie, must be disciplined.

A teacher at Champaign, Ill., was recently dragged into the police court to answer the charge of brutally whipping a girl. The witnesses, parents and children, indulged in testimony highly sensational and damaging to the teacher. It was a cause celebre.

But, here is what developed, as reported by the local newspaper: "The stick used on the girl was shown the jury. It was but little larger than a lead pencil and about two feet long. It was shown that the pupil received the whipping through a heavy winter coat after she had resisted a milder form of punishment."

It further developed "that the bruises left on the girl's body could not have been made by the stick shown, but were caused by the fight among the children on the way home from school."

While a single case may not prove to be typical of many others, and while corporal punishment may in instances go to excess, it nevertheless remains that there is a tendency on the part of parents towards harmful sentimentality in dealing with the matter of school discipline. To bring a teacher, who has performed a duty courageously and well, under the odium of a police court trial, is cruel and reprehensible. But, the problem goes deeper. It involves the welfare of the child. The undisciplined youngster may be heading for future police-court trials of a more serious nature.

In the face of the embarrassing possibilities which confront those who are called upon to inflict corporal punishment, it is only logical that school authorities should eliminate its application altogether, notwithstanding the fact that in rare instances it constitutes a wholesome and the only efficacious corrective that can be employed.



DEPARTMENT HEADINGS EMPLOYED IN STUDENTS' SCHOOL PERIODICALS.

and school-pledge, may be printed in a conspicuous place in each issue. The newcomer quickly absorbs the enthusiasm, and soon forgets his former school in his zealous and loyal admiration of his new school-home. No school paper can be a success which does not receive the cheerful and constant support of those more directly concerned in its management. Much time must be given out of school to the work, but there will be found a large return in the growth of the higher esprit-du-corps, and the paper will become a most valuable asset in the hands of a capable principal to train and develop the loyal and enthusiastic support of pupils, parents, and the citizens of the community.

Results Which May be Accomplished.

(1) Greater interest in written composition work of the students will develop better English.

(2) The subject of drawing will receive a great stimulus, as the best original sketches or designs may be printed.

(3) A wonderful degree of school pride may be developed and successfully maintained.

(4) The older pupils who assist in the matters of advertising, subscriptions, circulation,



Equipping the Physical Science Laboratory

E. V. Laughlin, Hopkinton, Iowa



It should be stated at the outset that the laboratory work is the vital part of science teaching. High school students do not care a great deal for the sciences unless they are practical. The visual appeals tremendously to young folks. A siphon, for example, actually displacing water signifies a whole lot more than textbook or blackboard figures. It is the same with respect to air pressure in its various forms. Boys and girls have a much greater respect for the textbook statements after they have vainly attempted to separate the halves of exhausted Magdeburg hemispheres. It is indeed a disheartening process to attempt to interest high school folks in the sciences without providing a reasonable amount of experimental work. Recognizing this fact it becomes highly important that opportunity for such work should be provided.

To be of the greatest value a laboratory should be planned with an idea to convenience. The writer recalls one of the first laboratories that he had charge of. It was in an aristocratic little city of 3500 people in western-central Illinois. There were twenty students in the physics class. The laboratory was a room not larger than twenty feet by twenty. The center of this room was occupied by a single table about twelve feet long and six feet wide. Such water as was needed had to be carried from the school pump in a three gallon bucket and the used water had to be removed in the same way. Individual work under such circumstances was practically impossible; and even when the students were arranged in groups there were times when many students had to wait until a space would become available at the single table.

Scarcely better was another laboratory in a wealthy little community in central part of the same state. As far as floor space went the laboratory was amply large. It was a basement room situated not far from the heating plant. The windows were high up and small. The concrete floor was none too level and all the tables had to be wedged up to make them sit without wobbling. Frequently, in fact almost every day, ashes and coal dust would sift in from the nearby furnace and cover tables and apparatus with dust proverbially an inch thick. It is not to be wondered that the young women entered the laboratory with manifest reluctance and hurried away at the earliest possible moment. The sink in the corner was of stone, and in spite of ever so much washing was always black and dirty looking. Under such circumstances it is not to be wondered at that both teacher and students looked forward to lab days with a sense of dread and that they were happy when the ordeal was over. Laboratory work under such conditions is attended by only a small measure of profit.

The location of the laboratory is one of the first important things to be considered. Too often there is a tendency to shove laboratories off to the basement or into some room considered not much good for other purposes. This is a mistake. Light, heat, and cheery surroundings have a great deal to do with the attitude of the students for this feature of their work. Poor conditions naturally lead to work of poor

quality. It is a duty of those having charge of the placing of laboratories to see to it that comfortable, pleasing quarters are provided. Of course, it is not always possible to have conditions ideal. However, a little architectural rearrangement coupled with the services of experienced decorators and plumbers may accomplish wonders. The writer at various times has directed the making over of unattractive laboratories; and he knows from personal experience that additional windows, newly plastered, expertly decorated walls, tight, well-oiled floors, will quickly change a dingy hole into a sunny, convenient room.

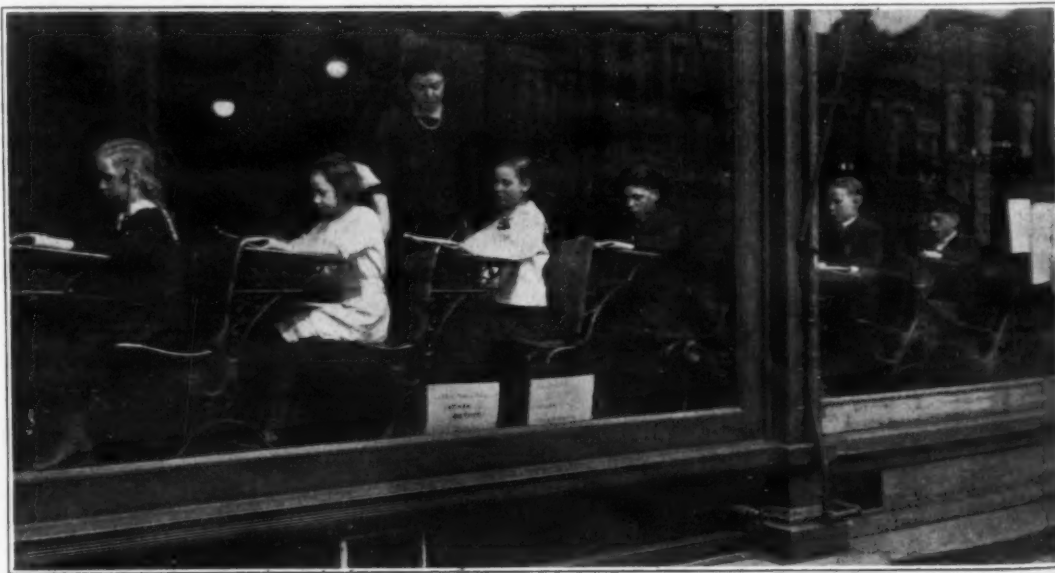
Running water is an almost absolute necessity in laboratories. There should always be several taps as this saves much of the time of students. If there is a water system in the community the supply should be obtained from this source; if there is not, however, resources must be had to pressure systems or to attic reservoirs. At each tap there should be a flat bottomed sink connected with outlets leading to sewers or septic tanks. In selecting sinks for these places make sure that the bottoms do not round for laboratory vessels and utensils never set level on such bottoms. In using this caution a tremendous lot of future inconvenience will be avoided. The taps at these sinks preferably should rise sixteen or eighteen inches and terminate in a U delivery. This makes it easy to fill tall vessels.

No laboratory is convenient without ample furniture. Usually this is of two kinds—tables for the students to work at, and cases for holding apparatus. The tables put out by the various school furniture firms are ordinarily more satisfactory than those made at home for the reason that the dimensions and structures are such as suit them for school use. Local carpenters often try to weave into their work their own notions of how such furniture should be made with the result that students are inconvenienced. When all expenses are taken into account it will usually be found that the manufactured article costs no more than the home made one.

Good cases pay for themselves many times over in the saving of apparatus. Modern science apparatus costs too much to be banged around from place to place. The cases should be provided with locks in order that they may be secure against prying fingers. Oftentimes a great amount of inconvenience is caused by meddling students fingering over—monkeying, in plainer words—apparatus. This should be made impossible by keeping all such apparatus under lock and key except when in use. In addition good looking cases lend dignity to a laboratory and help students to realize the worth of the expensive material they may contain.

It would be difficult to lay down specific rules regarding the equipping of a laboratory with apparatus itself for much depends upon the number of students to be served and the nature of the experiments to be performed. The writer has found it a good thing to precede about as follows: Sometime before laboratory work is scheduled to begin a careful invoice is made of what will be needed. In making this invoice particular account is taken of the number of students to be served and the specific requirements of the laboratory guide or manual that is to be used. So far as possible new apparatus needed should be like that described in the manual. In making the invoice excess is allowed for those items that wear out quickly or which are apt to break easily.

In addition to the manual requirements due consideration should be given also to the things that will be needed to accompany lectures or textbook demonstrations. Several hours spent in preliminary work of this kind richly repays the expenditure. Nothing is more tantalizing than to get ready for a certain laboratory exercise and then to find that some of the needed items are not at hand. This looking ahead and planning definitely for the needs of the year is one of the things that makes lab work easy for the teacher and satisfactory for the student. It is, indeed, an integral feature of equipping a laboratory.



ADVERTISING BETTER SCHOOL WEEK.

Better School Week at Corry, Pa., was observed by a number of novel plans that brought the schools prominently before the community. One of the most effective means was a daily exhibition of writing conducted in a prominent store window. The same window was used for demonstrations in cooking and millinery by groups of high school pupils. Later a complete office organization, consisting of clerks, stenographers and bookkeepers, was maintained in the window for an afternoon. Mr. A. E. Hemstreet, Superintendent of Schools, supervised the work.

The American School Tax Problem

Some of the World-Tested Methods of Exacting Public Revenue

Article IV

William George Bruce.

"What in the way of culture, efficiency, and good citizenship has the country reason to expect in return for the cost of operating the schools?"

"The figures for the year ended June 20, 1920 show a total expenditure for the public schools by all the states of a trifle less than nine hundred million dollars. With the growth of population and the upward trend of wages that persisted in the early part of the last fiscal year, we may safely assume that the total expenditure for public education during the year ended June 30, 1921 was between \$1,000,000,000 and \$1,100,000,000 which is approximately \$10 for each man, woman and child in the country. Let us compare this expenditure with the total expenditure of 1911, a decade previous. The total expenditure for that year was \$446,727,000 or \$4.76 for each unit of population. The Federal department of commerce is authority for the statement that during the year 1921, the purchasing power of a dollar was less than half its purchasing power in 1911. In other words, the \$10 per capita expended for public education in 1921, could purchase no more than \$4.76 per capita expended in 1911. The so-called increases in school expenditures during the last decade have therefore not been increased at all. School expenditures measured in purchasing power are no greater today than they were before the war. After all the agitation and enthusiasm for education growing out of awakened recognition of the nation's dependence upon and duty toward the youth it had drafted for its defense, we find that expenditure for schools has barely kept up to the pre-war average. The country as a whole is spending for education in 1922, a less proportion of its total income than in 1911.

"The answer is simple and direct:—inasmuch as it is spending no more of purchasing power upon the schools in 1922, than it was expending in 1911, it has reason to expect no more by way of culture, efficiency, and good citizenship than it secured by the expenditures of 1911. It has reason to expect no more but as a matter of fact it is getting more, the increase being chargeable to the devotion of the great body of teachers and school administrators to the cause of better America. Will C. Wood, State Superintendent Public Instruction, California.

If the great problem which confronts America's system of popular education were expressed in one word, that word would read "Finance." School administrators throughout the country have come to the realization that the pressure for more adequate financial support has reached an acute stage, bringing to the fore the question whether the present momentum of progress shall be halted or continued.

An affirmative attitude here implies not only a complete understanding of the financial requirements involved in maintaining present standards of school efficiency but also a study of the sources of support. In fact, the school administrator who turns to the legislators for relief must manifest an intelligent grasp of the tax sources that will be fruitful of added revenue without becoming oppressive.

In this series of articles the expansion of the school service, the inadequacy of support, and the question whether the schools are entitled to more money have been discussed. It has also been demonstrated that the present sources of revenue are strained to their utmost and that new sources must be uncovered if the desired results are to be attained.

"We have been discussing for many years, the problem of the reform of our state and local system of taxation. While there has been no complete agreement as to the remedy, there has been a virtual unanimity in the diagnosis of the disease. The three fundamental shortcomings of our present system, apart from many minor evils, are recognized to be the persistence of the general property tax as the sole or principal source of revenue; the system of purely local assessment; and the utilization of real estate tax for both state and local purposes. By far the larger part of dissatisfaction with our system is referable to one or other of these facts. And it is a cheering sign of progress that whereas a decade or two ago this analysis was recognized by only few students, still fewer officials and a very insignificant fraction of the general public in the most advanced industrial states, there is at the present day a widespread acceptance of its truth in almost every state of the union and in continually larger sections of the population. Essays in Taxation, Edwin R. A. Seligman, Macmillan Company.

These discussions have led to the inevitable conclusions that the present methods of taxation employed by the several states are fundamentally inadequate and defective and demand a revision. It has been demonstrated that the personal property tax is a failure, that the realty or property tax will not bear added burdens, and that relief must be sought in a more equitable and serviceable instrument, namely through Income Taxation.

Cost of Schools Was Never Lower.

In any argument dealing with the question of increased support for the schools the affirmative must prove that the present support is inadequate, or else that reinforcements involving more money are imperatively necessary. While the latter contention may contemplate more intensive progress, it might also be interpreted as a confession of weakness. The conclusion must be that the progress of the past has implied more service and an intensification of that service.

But, the former contention, namely, that the present support for the schools is inadequate, is more immediate and apparent. There is in the public mind an undefined belief that the schools are dispensing more, as well as a better quality of education.

Let us touch for a moment upon the marvellous development of the high schools. In 1880 there were 800 high schools in the United States and increased in 1900 to 6,000; in 1910 to 10,213; in 1918 to 14,000 a total increase since 1890 of 452 per cent. Within this period from 1890 to 1918 the population grew from 62 to 105 million, a gain of 70 per cent, while the high school enrollment increased from 202,000 to 1,645,000, a gain of more than 800 per cent.

A comparative table prepared by the United State Bureau of Education, states that the nation's wealth per pupil in 1870 was \$3,457, and in 1912 it was \$9,648, showing a threefold increase. The per capita expenditure for education in 1870 was \$9.23 and in 1912 it was \$26.56. The amount spent per pupil for each \$1,000 of taxable wealth in 1870 was \$2.68 and in 1912 was \$2.75.

This would indicate that there was a slight increase in the cost of education as expressed in dollars and cents. When opposite these figures the fact is set forth that the school

terms have been lengthened that the attendance in primary and grammar schools has almost caught up with the actual school population, and that the percentage of attendance in the high schools has been increased seven-fold in fifty years, then it follows, too, that the cost of education is less than it was fifty years ago.

During the past ten years there has been an even greater tendency towards longer school terms, fuller attendance through compulsory laws, greater popularity of trade, continuation and high schools, which has not only resulted in providing more and a better quality of education, but in the light of the nation's increased wealth, together with a depreciation of the purchasing power of the dollar, has been obtained at a lower per capita cost.

Income Taxation in the Several States.

While the United States did not accept the income tax principle until its entrance into the World War made this necessary, the states have experimented more or less with income tax laws for many years.

If they have not measured up to the expectation of their proponents it is because they have been faultily constructed and indifferently administered. The proof for this statement will be found in the fact that some states have devised income tax laws which have proven highly serviceable and which have obviated the embarrassments which now confront the schools of all other states.

Inasmuch as this discussion addresses itself to the school administrators of all city, county and district school units in the several states it may be well to bring to their attention the status of state income taxation.

In making this enumeration let us preface it with the remark that there may be those among our readers who will look upon state income taxation as a newly discovered device of fiscal reform. To these let us say that the income tax was applied in the early Colonial days and has been tinkered with in some twenty states at various periods of their existence.

Alabama.—In 1844 this state began to exact a tax of one-half of one per cent on the income of certain professional and salaried men. In 1848 it was increased to one per cent, and in 1862 it included five per cent on net profits of many lines of business. The rates were again raised in 1864 and in 1866. Thereafter the exemptions were raised and lowered. Lax administration rendered the law unpopular and it was repealed in 1884.

Delaware.—From 1869 to 1871 a partial income tax was exacted. It was confined to lawyers, physicians, state and county officials, bankers, brokers and real estate men and soon fell into disfavor.

Florida.—One fifth of one per cent was levied upon the income of lawyers, doctors, public weighers of cotton and other produce, public inspectors and pilots in accordance with a law enacted in 1845. Five years later the rate was increased to two per cent and made to include commission merchants. The revenue collected was insignificant. The law was repealed in 1855.

Georgia.—This state administered a most efficient income tax law during the Civil War period. Inasmuch as it was recognized as a war measure only it became obsolete with the close of the war.

Kentucky.—In 1867 a law was passed exacting an income tax from holders of United States bonds. Five years later the law was declared unconstitutional.

Louisiana.—This state began to exact an income tax in 1865 at a rate of one-fourth of one per cent on incomes in excess of \$2,000. In 1878 the rate was raised to thirteen mills on all incomes over \$1,000. In 1882 the rate was lowered to six mills. The lax administration of the law has made it a dead letter.

Maryland.—Owing to gross iniquities which crept into the income tax law enacted in 1842 it soon became unpopular. The public also resented the inquisitorial features of the law. The governor in 1844 referred to the "deplorable remissness in the execution of the tax laws" and in 1850 it was repealed.

Massachusetts.—This state is one of four which still exacts an income tax. The tax is practically a failure because it does not define income with sufficient clearness, because the administration of the law is left to local tax units, and because evasion is made easy. It conceded that the experience of the state does not condemn the income tax theory.

Missouri.—In this state the income tax was administered as a war measure during the years from 1861 to 1865 and automatically became defunct.

New York Collects Thirty-Four Millions.

New York.—The Personal Income Tax Law as passed by the Legislature of 1919 imposed a tax at the rate of one per cent on the first ten thousand dollars of taxable income, two per cent on the next forty thousand, and three per cent on taxable income in excess of fifty thousand dollars.

During the first year the collections totaled thirty-seven and one-half million dollars. In that year there were received 745,355 individual returns of which 708,843 were from residents and 36,512 from nonresidents. There were also received 29,937 partnership returns, 9,559 fiduciary returns, and 49,713 reports from withholding agents (employers). These last were accompanied by 951,655 information at the source report cards.

In 1921 the total payments on the 1920 tax were approximately thirty-four million dollars. They were made up of 1,135,393 individual, 30,319 partnerships, 11,665 fiduciary, 80,607 withholding agents and 1,420,592 information at the source cards.

The expenses of administration, including the rental, of twelve district offices distant from the main office in Albany for the six months ending June 30, 1921, was \$523,429.83. Figures are not available to show the expenditures for the period from July 1st to December 31, 1921.

All individual returns are audited and, in addition, an investigation division has field representatives operating throughout the state. In the first year of the collection of tax receipts from audit assessments were \$257,831 while additional penalties realized \$109,560. On the 1920 tax the additional assessments were \$739,706, while penalties and interest added another \$116,471.

On the 1920 returns audited, the total additional taxes found due were \$1,635,590, while refunds were made totaling \$298,182. Of the amount of additional taxes assessed, \$133,336 was obtained by Field Audit Section of the Audit Division.

In the Investigation Division in 1921, 98,318 investigations were made; 19,051 returns were obtained, and taxes collected totaled \$361,253. The average collection per day per man from this source was \$40.37.

North Carolina.—In 1849 a law was enacted whereby a tax of three per cent on interest and profits on certain investments was exacted.

DEFINITION OF SCHOOL BOARD.

Upon due reflection I have unwittingly arrived at this definition of a School Board:

A school board is a board seldom made of soft wood—usually of tough old hickory, smooth and polished; not always cross-grained, but full of k(not)s—we do k(not), we can k(not), we will k(not); impervious to dents made by criticisms or requests of old ladies; never used for ornamental purposes—wholly utilitarian; a plank for disgruntled persons to walk over; a pillar of strength, with taxpayers struggling to support it, and surmounted by a Corinthian cap of school enthusiasts.

When the public want to hot-hand an individual they do it with a school board.

Goodness knows what the Secretary is for—I guess he's the "check" in the board.

(Received from a citizen by Mr. Reuben W. Jones, Secretary of the Seattle School Board.)

Many changes followed in successive years in rates and exemptions. The law now exacts one per cent on all gross incomes in excess of \$1,000. Iniquities and a lack of administrative protection have rendered the revenue results disappointing.

Oklahoma.—In 1908 the state enacted law which exacts a tax on all gross incomes of \$3,500 and over for the benefit of the schools. It is a graduated income which begins with one-half of one per cent and raises until it reaches three and one-half per cent on incomes of \$100,000 and over.

Pennsylvania.—In a feeble way this state began its income tax experiments in 1817. In the year 1841 it began to exact one per cent on salaries and fees but the yield was so meagre that the law was repealed in 1871. In 1835 a graduated income tax of three per cent on bank dividends was enacted and later amplified into a nominal corporation income tax which is yielding a comparatively small revenue.

South Carolina.—This state enacted and abolished several income tax laws extending over a period of over two hundred years. During the Civil War a general income tax of one per cent was exacted on certain professional incomes and on salaries over \$500. With the adoption of a new constitution in 1868 the income tax was dropped. In 1897 another law was enacted with a graduated rate beginning with one per cent on incomes of \$2,500 and raising until a rate of three per cent on \$15,000 and over was reached. The yield is nominal.

Texas.—This state, too, exacted an income tax during the Civil War. In 1909 a bill taxing incomes in excess of \$2,000 at the rate of one per cent was passed in the lower house of the legislature but was lost in the senate.

Tennessee.—In 1883 income derived from shares of stock was subjected to a five per cent tax. In 1895 income derived from United States bonds was included in the tax.

Virginia Secures Substantial Yield.

Virginia.—It is said that notwithstanding the "complexities and imperfections" of its income tax law that the state of Virginia has been able to secure a substantial revenue yield through that instrument. In 1843 it imposed a tax of one per cent upon all incomes in excess

of \$400 received for personal services and two and one-half per cent over \$100 from investments. During the Civil War period the rate was increased and the scope of the law widened. Since then the law has been amended in several respects. In the year 1887 the revenue was \$38,950.84 increasing annually until in 1908 it was \$102,810.50.

In 1921 the revenue amounted to \$2,000,000. This revenue goes into the general state fund, from which the legislature makes cash appropriations for various state agencies. The cash appropriation for schools for the past two years has amounted to \$1,800,000 per annum, in round numbers. The total appropriations by the legislature for all purposes amounted to more than \$20,000,000. Consequently, the percentage of revenue from income tax which the schools receive is about ten. The present tax rate on incomes is one per cent up to \$3,000 and two per cent on all amounts above \$3,000. Single men are entitled to an exemption of \$1,000, and married men to an exemption of \$1,800 with \$200 additional for each dependent.

West Virginia.—In 1863 the state modeled an income tax law after the Virginia law. The earnings on corporation, state and county bonds were subject to a five per cent tax. The law was later amended to adjust the income tax with a license tax, exempting from income tax those who were subject to the other. The law has become a dead letter.

Wisconsin Law a Complete Success.

Wisconsin.—The state adopted an income tax law in 1911 and amended the same at each biennial session thereafter. The remarkable success of the law must be found in the fact that its framers avoided the weaknesses which thus far had rendered similar laws in other states a failure.

The state proceeded to give earnest attention to the administrative features of the law and to see that the administrators were efficient, energetic and honorable. The law provided for a graduated tax on incomes designed to take the place of the personal property tax and to yield a substantial return. The personal property tax was not abolished, but retained to serve as an offset to the income tax. In other words, the personal property tax, wherever levied, was deductible from the income tax, or vice versa, the higher of the two being paid.

The law as it now stands fixes a tax for individuals at one per cent on the first thousand dollars of taxable income, or any part thereof. It increased by one-quarter or one-half per cent with each additional thousand until the income has reached any sum in excess of twelve thousand dollars when the tax is raised to six per cent.

The tax on incomes of corporations is fixed at two per cent for the first one thousand, and then graduated upwards at a rate of one-half per cent until the rate becomes six per cent on taxable incomes in excess of seven thousand dollars.

The Growth of the Income Tax in Wisconsin.

Year Ending June 30	Total	Cash		Per cent		Per cent	
		Collections	Total	Offsets	Total	Offsets	Total
1913	\$ 3,241,124.40	\$ 1,631,412.38	50.33	\$ 1,609,711.02	49.67		
1914	3,831,173.86	1,935,846.54	50.53	1,895,327.32	49.47		
1915	3,990,117.05	2,002,212.53	50.18	1,987,904.52	49.82		
1916	3,732,083.31	1,906,441.69	51.07	1,825,641.62	48.93		
1917	5,200,373.55	2,988,766.66	57.48	2,211,606.89	42.52		
1918	9,345,154.86	6,037,719.19	64.61	3,307,435.67	35.39		
1919	11,658,670.66	6,951,482.70	59.62	4,707,187.96	40.38		
1920	11,814,982.88	6,243,376.47	52.85	5,571,606.41	47.15		
1921	11,112,998.00	4,594,984.00	41.35	6,518,014.00	58.65		
	63,926,678.57	34,292,242.16		29,634,435.41			

Explanation: The column headed "Total" represents the combined income tax and personal property assessments. Under the law only the higher of the two, the income tax or the personal property tax, is collected. Thus, the lower becomes an offset. The table shows also the total offsets and the actual cash collected.

The law provides for exemptions of \$800 for single individuals, \$1200 for families, and \$200 for every child under eighteen; on dividends received from banks, pensions, inheritances, insurance moneys, incomes from property, etc., etc.

Aside from the income tax law there are also inheritance taxes, soldiers' bonus and teachers' retirement surtaxes, which do not come within the range of our discussion. It may also be stated that the regular property tax is maintained the same as it was before the income tax came into existence. It is believed, however, that the income tax has been the means of keeping the property tax from becoming oppressive. The Tax Commission has recommended that the personal property tax be abolished entirely, a proposal which has the approval of tax students familiar with the subject.

Is State Income Taxation Feasible?

The answer is decidedly in the affirmative. The income tax as devised and administered by the several states above enumerated, with some notable exceptions, has proven a failure. The exceptions, however, teach that the causes for failure are found in conditions and circumstances which can be overcome in more efficient tax instruments and agencies. The principle is sound, the application feasible, and the results satisfactory.

Where failure has been encountered an enlightened public sentiment was lacking. The taxpaying constituency had become accustomed to the realty tax, and had adapted itself to its exactions and its penalties. Failure to pay taxes was followed by the sale of the tax titles, and eventually the forfeiture of property. It had not accustomed itself to the income tax, and was unwilling to abide by its exactions and penalties. The latter implied a money fine in

case of failure to meet the tax involving complications, and encountered difficulties when it came to the enforcement of collections.

On the whole, it may be said that the income tax principle had not been recognized by the national government when the several states experimented with the same, and, therefore, was largely looked upon as a foreign contraption, too inquisitorial to be wholly American, and altogether a superfluous instrument.

There, too, were those among the tax specialists of this country who, while they were strong advocates of the income tax principle, did not believe in its acceptance as a device for raising state revenue, before it had been accepted by the national government. The reasons here were obvious: The producer who stood in a competitive attitude to the producer of an adjoining state believed that all added tax burdens were discriminatory. The income tax, he believed, added a burden to his product which must compete with a similar product not so burdened.

But, the situation has changed. The United States government has at least accepted the principle of taxation which rests upon "the ability to pay" basis, and while it came as a war measure it has become a fixed fiscal policy of the nation.

This change affects quite materially the attitude of an entire taxpaying constituency. The equity involved in the relative differences between the old property tax and the income tax has come into greater recognition. If the nation can employ this device with success, why not the state? If it exerts greater equity than any other known means of exacting tribute, and produces a more liberal yield, why not employ it in relieving the school situation?

"Until the recent adoption of the federal in-

come tax, the outlook for a successful state income tax was exceedingly slight; now, however, the situation is entirely altered, and is full of promise," says Prof. Edwin R. A. Seligman.

When the Illinois constitutional convention, February 1922, adopted the state income tax the Chicago Tribune commented as follows:

"The income tax feature may not be popular, but it appears to be sound. If unpopular, it will be because under it the present sport of tax dodging is likely to become hard labor. With a maximum exemption fixed at \$500 it will mean that virtually every voter in the state will become a taxpayer. Probably nothing more conducive to good citizenship could be devised. Good government is likely to result.

"Also there is a matter of justice to be considered. Under our present system of taxation the dodging of taxes is morally condoned. 'Rich tax dodgers' are assailed by demagogues and poor ones are tacitly approved, particularly in the matter of personal property taxation, which affords the easiest ground for dodging and the only basis on which most persons of small means can now be assessed. Being told so often and so heatedly of the sins of the 'rich tax dodgers' the poor save their consciences by comparison and dodge even more effectively.

"Under the income tax plan much of that error bids fair to be corrected. The poor man will have to pay—a little. He will then see to it that the rich also pays. Tax dodging should be reduced to a minimum and the evils and injustices of class hatreds and class powers should be correspondingly reduced.

Note:—This is the fourth of a series of articles on the "American School Tax Problem". The first appeared in the February number of the Journal. The next will discuss in further detail the new sources of revenue for school purposes.—Editor.

Some School Doings in Rural Montana

Annette Dennison

After teaching for a year in one of the log schoolhouses, for which Montana is noted, I decided to be a candidate for the office of County Superintendent of Schools. Suiting the action to the thought I saddled my trusty saddle horse "Fox" and rode to the little town which was then the temporary county seat. Ekalaka is a town of about two hundred people and 25 log houses. It was typically western and in those days the cow boys were not afraid to ride on the sidewalks.

My plan of action was a little hazy, but I remembered that, when I took the teacher's examination the previous year, I was notified that Mr. Ballow the keeper of the little hardware store would give the examination, and I also remembered that, when I asked him for the questions, he threw them at me remarking:

"So you are one of those pesky schoolma'ams looking for a job and imposing on the public. Take these questions. I do not know why they pick on me when there are so many lazy, good-for-nothing people in this town with nothing to do. Why don't they wait on you teachers and tend to those pesky questions? Take them. I don't care where you write on them or whether you write on them at all or not."

So I took my "pesky" bundle of questions and proceeded to find a place where I could answer them undisturbed.

Recalling that experience and several similar ones following, small wonder I was a "little shaky in my shoes" when I approached him on this momentous day.

Running for Superintendency.

"Mr. Ballow," I began, "I have decided to become a candidate for the office of county superintendent on the Republican ticket."

No answer, but about three kegs of nails were shifted to different positions and there was a bang of falling saws and various other implements, more quaking and shaking on my part.

"Mr. Ballow," I began again and repeated my statement ending by saying: "I have heard that you are a staunch Republican and I thought I might count on you for advice and help."

It was then he faced me. "Miss L. when you came out of the East into this country to teach school and to prove up on one of these no account claims, I went home and says to my daughter: 'Jennie there is a real likely young lady out on Willow Creek and if you can save a little time from your nonsense and fol-de-rol and wishy-washy friends, I wish you would talk to her sometimes. She may put a little sense into your empty head.'

"Yes, I said these very words to my daughter, young lady, and I did set store by you. Haven't ye any friends or folks to advise ye not to go into this thing ye are talking about?"

"But I suppose if ye are as sot in your ways as most females are, ye will do it anyway in spite of them. Don't ye know the fighting, wrangling and caterwalling that goes on in these here schools? Don't ye know that ye will have to make peace among them and try to bring them to some terms?"

"Don't ye know that everybody gets into a school fight because a family fight is a little too private and not quite so free for all? Haven't you trouble enough with your dry land farm and your school that you want to bring all this trouble on yourself? Well, as I said before, I suppose your mind is sot and I must see you through."

Suiting the action to the word he took his hat and beckoned me to follow. He went directly to the courthouse which was an old schoolhouse fitted up with railings for partitions between the several county offices.

He introduced me to the candidate for county attorney who has since suffered mental derangement probably caused by the long lonesome rides over the prairie.

"Say young man, you and I is friends, leastwise I think we are. This girl is going to try for county office and I want you to help her. Give her all the law advice you know and see her through."

Covering Some Territory.

The petitions were then prepared in the regular way. Luck was with me for court was in session and jurors were gathered from all parts of the country.

This was the last day on which candidates could enter the field. It was necessary to have signers to my petitions from different precincts. We must keep in mind that Fallon was a large county at that time covering an area of 7,500 square miles, with a distance of 150 miles from north to south and bordered by three states.

Being the only candidate on the Republican ticket I had no trouble getting the nomination. The real fight came at the November election. I had two opponents, one on the Socialist ticket and the lady, who was the county superintendent at that time, on the Democratic ticket.

One was a married woman and her husband campaigned for her. Upon his asking one man: "Will you support my wife?" The answer was: "If you cannot support her yourself I won't help you."

Beginning about ten days before the election we canvassed the county thoroughly. History and geography are made every day in the west under your very eyes. I had the honor of taking part in one of the most hotly-contested county seat fights on record. Baker was fighting against Ekalaka to be the seat of government of the county of Fallon.

Each town sent its ablest speakers, an orchestra and a bunch of boosters to every little hamlet in the county. At each place a dance was given and largely attended by the young and old people of the surrounding country.

These were jolly gatherings and one does not mind having one's feet trampled on when you are a popular lady at a western ball and have a chance to win a vote from each partner. When we were safely launched on each new dance I told my partner that I was a candidate for county office and would appreciate his vote. No real westerner could refuse a lady under those circumstances.

But after the young man got his breath the question usually came: "Which do you favor, Ekalaka or Baker for county seat?" Upon your answer usually depended his vote.

Listen ye exponents of the doctrine that county superintendents should be appointed rather than chosen by direct vote of the people and I fear you will find a fierce argument in your favor.

Danced Herself Into Office.

No one asked; "Are you better qualified for the position than your opponents?" Yes, I literally danced my way into office, winning out over my opponents by a large majority.

There was much sorrow and some joy in the months which succeeded, but I carried my term to a successful termination being happily married to a wild and wooley cow-boy before the end of the two years.

I shall try to chronicle the events of the first month in office and leave it to you to decide if you blame me or not for making good my escape.

Jan. 2—Filled with high hopes and ideals. Found that the former superintendent had apparently given up the duties of her office as soon as she found she had been defeated at the November election.

Unanswered letters filled every receptacle. All important reports which should have been started four months before had not been started. The State Department was holding back the money which rightfully belonged to the schools of our county. The sheriff brought the former superintendent to the office with orders to remain until the late report was in the hands of the state superintendent.

Jan. 3—Letters which made me face the fact that nearly all the districts were just then receiving charts from some fictitious company in California for which some were paying \$35. Others paid \$50. A long winded agent had succeeded in getting into the county and made it plain to the trustees that no decent school could exist without these charts, no teacher could do effective work without those precious charts, etc. etc. Even though many of the schools had absolutely nothing else made no difference.

NEED TRAINED TEACHERS.

"During the last few years by organization and cooperation the profession of teaching has advanced as never before. The public has a right to expect that teachers be trained and fully equipped for the important work expected of them. If as teacher, we are to hold the confidence and respect of the community, our professional attitude should always be of such character as to inspire confidence.

The practice of underbidding the salary of another teacher or administrator is unprofessional and should be in every way discountenanced by those who have the highest ideals of the profession at heart.—Iowa Teachers' Association.

Settling a Few Troubles.

Jan. 4-5—My first important fight to settle came up in the extreme southern part of the county. There had been a division of the school district but no division of funds. About one hundred people had gathered, and I soon found that they meant business and, if they could not settle by word of mouth, they intended to use guns.

We succeeded in settling the dispute peacefully, however, and started to travel north about 9 o'clock at night. We travelled until about midnight when we saw one of the very few scattered houses along the trail brilliantly lighted as if for a party.

One of our party became very thirsty suddenly, therefore we decided to stop for a drink of water. Upon entering the house we found that they were about to serve a bountiful midnight meal. Our entrance was hailed with delight and true western hospitality held sway until morning.

We found that the object of the meeting was to decide what should be done with a certain Mr. E. who had put a padlock on the door of their one and only schoolhouse on the day their school was to begin. He claimed the building was his own, because it was on his land and announced that the person who dared to remove the lock would be arrested for trespassing. He was right, and here was a case in which the county superintendent had to use a clear case of bluff and tell him to remove the lock at once. I advised the trustees to have the schoolhouse removed as soon as possible to land that they could buy.

Teacher Had Another Beau.

Jan. 7—Mr. S. appeared with a grievance. "Our teacher does not seem to use common sense about picking her fellows. Now my son Philip is considered one of the likeliest young fellows in our neighborhood. He ain't strong on high falutin' language but he can hold his own in any game of checkers, and he is a good son if I do say so myself, as shouldn't.

"Our teacher last year let him stick by her right close, but this one we have now has to have a fellow come out from town with one of these high powered gas wagons. Pears to me like Philip is good enough for anybody."

January 8.—Mr. T. appears. "Our teacher doesn't do any kind of work according to my way of thinkin'. She was a boardin' at our place the first part of the term but she takes a notion she wants to leave. It ain't good enough for her."

January 9.—A salesman with a device for teaching arithmetic without any book on the teacher's part. Absolutely useless. He offers a substantial sum to me if I will allow him to sell it to the trustees. My morals are still good.

January 10.—Visited Miss H.'s school building which is in splendid condition. Geography class reciting, "Johnny recite!" Johnny gets up and reads a line. When he reaches the end of the line he stops. "Class recite." Then the class recites the line. "Mary recite." Mary gets up and reads a line. "Class recite."

Why She Quit.

January 11.—Miss C., a teacher, arrives. Travelled fifty miles in a blinding snow storm over roads which were almost impassable. Had received a letter from her mother in which she said: "Come home at once." Father worked in the mines in Butte. She thought he had been injured very badly or perhaps killed. Two days afterward this letter came.

Butte, Mont.

Dear Miss L.:—

Arrived home safely and we are all well. My mother received a letter from a Mr. M. with whose family I boarded for a time in which he said I was in very bad company and, if she cared anything for me, to have me come home at once. You know it is not true that I kept bad company. It is a clear case of jealousy because I changed my boarding place.

Yours

Jan. 11-12-14—Miss Polson, state organizer of commercial clubs arrives. Will I ever forget it? And I travelled three days with that lady. If she had another thought besides the rough roads and her aching back I did not hear her express it.

Jan. 15—Visited school in District 3. Miss S. asked me to have lunch with her at her boarding place. House consisted of one room with a curtain partitioning off the teacher's bed. No modesty was noticeable and the children acted very familiar. The teacher slept between blankets which were never washed. Table was set for lunch without cloth.

The lady of the house called me to one side and asked if I did not think there was something wrong with that teacher. "She bathes herself two times a week. Now the teacher we had last year did not take a bath once a month."

Jan. 16, 17, 18, 19—Held a successful meeting of all the teachers of county. Division directors were appointed, whose work it was to hold sectional meetings in different parts of the county.

Jan. 21.—Called up before the county commissioners to explain why my expense account ran so high. Was told I would only be allowed \$300 for whole year (Sheriff was allowed \$6,000). Puzzle: How can I visit 150 schools on \$300?

One member of the board was Pepper by name and more peppery by nature. "It is not necessary for a county superintendent to visit schools," said he. "Send good teachers and tell them to go to it."

A Knowing Cowboy.

Jan. 22—Cowboy visits the office. "I am in favor of letting everybody build their own roads and educate their own children." This was the announcement when he entered the door.

"We had a good country here before it was filled with 'honyoks' and schoolhouses. If people wanted to send their children to school before now they moved to where there was a school, now each man wants a schoolhouse in his backyard."

"Who is going to pay the taxes for all this? I hear they want to put them on wheels so they can move them from place to place and I sure hope they do." With that he withdrew.

Jan. 23.—Visited Miss S.'s school and found her fixed for comfortable living right in the schoolhouse, thereby helping to solve the boarding and teacherage problem.

Jan. 24.—Called to settle a school quarrel and found able orators each defending his own side.

Jan. 25, 26, 27—Attended the farmers' institute in Elkalaka. Took one day to go and one to return through blinding blizzard. Driver imbibed too freely of intoxicants and we had the pleasure of being upset.

(Concluded on Page 133)

Rating the Efficiency of the High School Principal

Paul V. Sangren, Formerly Superintendent of Schools, Clio, Mich.

A self-scoring card for the high school principal is here presented which is the result of studies of four topics: the functions of the high school principal, the functions of the business executive, what constitutes the efficiently administered high school, and the development of existing rating scales for teachers and executives. Besides these studies there were suggestions from graduate students and professors of education at the University of Michigan, conferences with students in an advanced class in secondary school administration, and numerous conferences with Inspector J. B. Edmonson, University of Michigan, who directed the study.

Much more might have been done to make the score card simpler and to evaluate the items if it had been thought that the card had been anything but a tentative plan. But I am quite certain that the scale may be a guide to better service, since no principal can closely study the questions asked without seeing greater possibilities in his position and so increasing his efficiency. The greatest value of the study and scale may be that it will serve to encourage others to study the functions of the high school principal and produce some scale which will be scientific and permanent.

Each question should be answered by placing a check in the proper column to indicate the degree of satisfaction, success, or effectiveness with which the activity is carried on. A check in column A will indicate that a very decided success is attained, a check in column B will indicate that there is only moderate success, a check in column C will indicate a noticeable lack or loss to the organization, and a check in X will indicate that the principal has not been given that particular duty to perform in his school. Having answered all the questions, the principal may construct a graph as illustrated below and so secure an estimation of his efficiency as an administrator.

I. Attention to Teachers.

With what degree of success does the principal:

1. Stimulate self-improvement on the part of teachers so that they may be advanced in the school system or elsewhere?.....
2. Exercise care and justice in rating and recommending teachers for promotion?.....
3. Encourage teachers to affiliate with and participate in work of professional organizations?
4. Insure that the health of teachers is safeguarded?
5. Inspire teachers to enthusiastic, loyal support so that they render their best possible service?
6. Train teachers in service by a well constructed plan of study and experimentation?...
7. Adjust teaching load to experience, health, and preparation of teachers?
8. Help teachers to realize the necessity of and how to identify themselves with life of the community?
9. Insure that teachers have a pleasant, wholesome place to live?.....

10. Create in teachers an enthusiastic interest in the welfare of pupils?
11. Cultivate a spirit of teamwork and friendliness among teachers?.....
12. Counsel with and inform teachers concerning needs and plans of the school?

II. Attention to Pupils.

With what degree of success does the principal:

13. Acquaint teachers with physical defects of pupils in her classes?
14. Acquaint teacher with principal outside demands upon pupils' time in her classes?....
15. Acquaint teacher with reasons for withdrawal of pupils from her classes?
16. Acquaint teacher with home life of her pupils?
17. Acquaint teacher with vocational and study interests of her pupils?.....
18. Acquaint teacher with principal individual difficulties of her pupils?
19. Endeavor to make course of study meet individual needs of pupils?
20. Make provision for guidance of pupils?..
21. Arrange student activities so that large percentage of pupils take part and reap benefits?
22. Insure that health of pupils is safeguarded?
23. Shape work and spirit of school so that pupils from all walks of life are attracted?....
24. Shape work and spirit of school so that large percentage of entering freshmen graduate?

III. Attention to Parents and Community.

With what degree of success does the principal:

25. Secure cooperation of civic clubs, and other agencies of social uplift?.....
26. Secure close correlation of his office with juvenile, health, and attendance offices?.....
27. Endeavor to make course of study meet needs of community?
28. Acquaint parents with values of different courses of study so as to aid in classifying?...
29. Establish an effective parent-teachers club?
30. Secure cooperation of patrons in solving social problems of the school?
31. Acquaint parents with regulations and practices of school to make for cooperation?...
32. Participate in civic and educational affairs of community involving student welfare?..
33. Establish cooperation between school and industrial organizations for educational purposes of both?.....

IV. Attention to Supervision of Instruction.

With what degree of success does the principal:

34. Stimulate and encourage experimentation and investigation on the part of capable teachers?
35. Measure attainments by standardized tests and help teachers to interpret results?
36. Make constructive criticism of teachers' work?
37. Supplement each supervisory visit with a conference with teacher?

38. Encourage teachers in freedom of expression and initiative?
39. Aid teachers to apply proper methods by means of conference at teachers' meetings?....
40. Encourage teachers to visit other school systems as often as possible?.....
41. Insure proper attention to physical conditions of classroom?
42. Encourage teachers to teach from notes rather than from text?.....
43. Define and interpret courses of study and objectives of work?
44. Secure cooperation of teachers in working out units of courses of study?
45. Attempt to standardize marking, grading, and promoting so as to secure greater justice?..
46. Acquaint teachers with merits and faults to be considered in appraising classroom work?
47. Secure necessary instructional supplies?..
48. Aid teachers in solving problems of classroom discipline?
49. Secure united emphasis of teachers upon certain fundamental habits of study?

V. Attention to Organization.

With what degree of success does the principal:

50. Organize pupil interests into effective auxiliary agencies of administration?
51. Organize staff into enthusiastic, efficient agencies of administration?
52. Provide for operation of student-teacher board as an aid in administration?
53. Organize work of the school so that it fits into entire educational purposes of city?...
54. Give clear directions to those he directs?..
55. Organize administrative phase so that there is a clear gradation of authority and responsibility from teacher to department head to supervisor to principal so that the work is effectively and democratically done?

VI. Attention to Publicity.

With what degree of success does the principal:

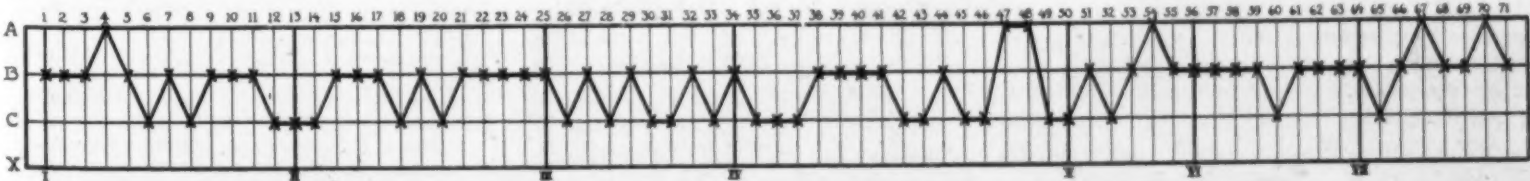
56. Inform public of school needs and situations?
57. Present worth while reports of school situations to board and superintendent?.....
58. Secure extension of education by exhibits, lectures, and night schools?
59. Address clubs and organizations on school needs and policies?
60. Inform pupils concerning aims and plans of school?
61. Arrange visiting days for patrons to observe teaching and results of work?.....
62. Secure cooperation of parent-teachers club in spreading correct information concerning school?
63. Establish interest of patrons in school by means of student activities?.....

VII. Attention to Routine and Detail.

With what degree of success does the principal:

64. Routinize, minimize, and delegate details of administration?
65. Establish regular hours of conference with pupils, teachers, and parents?

(Concluded on Page 134)



THE AUTHOR'S RATING APPLIED TO A HIGH SCHOOL PRINCIPAL WHO IS NOT PARTICULARLY SUCCESSFUL.

Some Objectives for School Principals

A. McDonald, Superintendent of Schools, River Rouge, Mich.

We hear much these days concerning the rapid progress made by agencies for the promotion of educational opportunities. Has the pressure for greater educational facilities been forced upon us or have we by our enlightening leadership created this growing passion for education on the part of the masses? Some of us are not so sure that we have done our full duty in creating this progressive demand. We are very certain, however, that the great majority of us have been afflicted with mental inertia and want of initiative in one branch of our work as evidenced by the existence if a school official within our ranks whose major duties have never been clearly defined. Up to very recently nothing has been done by our normal schools and university departments of education to give specific and definite training to those desiring to go out as grade or high school principals. In consequence of this neglect on the one hand and the want of initiative on the part of the principals on the other, we have had and will continue to have for sometime to come a school official the reasons for whose existence will continue to be a real puzzle to many laymen, teachers and pupils. In the meantime with the depression weighing heavily upon us we are of necessity forced to justify the expenditure of every dollar asked for in our budget. That we may be able to render somewhat better account of our stewardship to the community, pending the arrival of the time when the duties and function of the school principal may be better defined by those more able, the following brief list of suggestions are humbly submitted that they may serve some weary soul who has been tortured to find something more profitable to do than simply perform those routine duties that accidentally drift his way.

That there should be unlimited opportunities for rendering genuine service on the part of all those appearing upon the educational pay roll goes without saying. At the outset we are assuming that the multiplicity of routine duties that must be attended to by every principal should not be neglected. We wish to emphasize that a principal's time should be so carefully organized that the routine tasks will be performed at an assigned period of the day when the great object for which the institution exists may best serve its purpose; in other words, every principal, like every other successful professional and business man, should have a clearly worked-out plan for each day's performance. This will require some intelligent analysis to be done at the close of each day's session. Only by such a procedure will any school official be able to justify his name appearing on the educational calendar of his community.

To insure success or make success more certain there has been an implication that all entering into the teaching service should have a group of specific objectives to be accomplished during each semester. The existence of these specific goals and the earnest desire on the part of the teaching staff that these goals be fully attained by the close of the semester creates, if you please, the real job that we are setting up for the long neglected individual, denominated the school principal.

In brief some of his essential duties follow:

1. Assign the teaching load in accordance with the training, experience and enduring capacity of each member of the teaching staff.
2. Having seen to it that all the pupils are classified according to their mental capacity and aptitudes the principal should visit as many classrooms for the purpose of supervision as the

needs of both teachers and pupils will warrant to the end that the accepted objectives of the teachers are progressively attained.

3. To personally conduct or direct an experimental clinic to test out all methods and proposed classroom practices before asking their adoption for general use.

4. Should administer intelligence tests from time to time to classify and re-classify doubtful pupils so that the number of failures shall be reduced to a minimum.

5. Conduct as many teachers' meetings and hold as many conferences as the best interests of the teachers, the school and the profession demand.

6. Conduct experiments with groups of pupils of different levels of intelligence to determine the mental capacity required at which time a subject can be most successfully prosecuted.

7. To conduct short tests in all subjects at the opening of each semester to learn the extent of knowledge of each subject that each child may already possess so that assignments and classroom demands may vary according to the needs and capacities of each child; and then at the close of the semester to make a careful invoice of the classroom products in order to ascertain the actual progress made since the initial tests were given."

8. Rather than rely on personal opinion only the principal should compile concrete evidence of different performances of the child in question before demotion or promotion is ever attempted.

9. Aid teachers to prepare unit-tasks to be assigned pupils temporarily failing due to illness or other causes.

10. To see to it that all of the school work is motivated as far as possible so that pupils may see an immediate goal for their efforts.

11. To feel personally responsible for the successful achievement of the prescribed course of study, but to reserve the right to object to a change in the course of study after the teachers' objectives have been approved and accepted for the semester.

12. Expect as a matter of courtesy that all supervisors or superintendent shall leave in the principal's office a copy of suggestions or outlines left with the teachers so that such suggestions or outlines may be faithfully carried out by the teachers, provided such suggestions or outlines will aid the teachers to attain the accepted objectives.

13. To conduct tests from time to time in the different branches taught and to interpret the results with the teachers to make certain that the standards of scholarship are progressively accomplished, and to determine whether or not a change of presentation of the subject matter may be desirable.

14. Should always lead the teachers to realize that the school exists solely for the pupils, and in consequence of which that the teachers should be in the background as advisers and directors to the end that the pupils may become independent, self-directive and develop high standards of self-appraisal, both as to conduct and scholarship.

15. Study the interests, ideals and aspirations of the community and direct the extra school activities to the end that the best interests of the community may be more rapidly and effectively achieved.

16. At the close of each day to appraise the day's achievement and then plan the work of the following day.

17. At the close of each semester shall make a careful invoice of the classroom products so as to ascertain the progress made since the initial tests were given at the opening of the semester.

18. Set the standards of conduct for all the pupils that may form the true basis of good citizenship.

19. By the use of simple graphs to encourage all pupils to be regular in attendance and prompt in the performance of all school tasks.

20. Should always endeavor to establish and maintain a relationship of mutual confidence and cooperation between pupil and teacher, between parent and teacher and between all on one side and the principal on the other.

21. To acquaint the parents and the community through the parent-teacher association with the large objectives to be achieved by the school as a whole and by its various departments.

22. To send teachers, needing special help in better methods of instruction, to observe a demonstration class in teaching in the same building or in some other near-by school.

23. To cooperate with all other school officials of the community to the extent that the schools may serve all the people of all ages.

24. Given sufficient time for adjustments and re-adjustments by the use of intelligent and capacity tests at the opening of each semester, it should be the ultimate aim of the school to have every pupil find happiness in his work.

SOME OF THE HIGHEST PAID JUNIOR HIGH SCHOOL TEACHERS (1921-22).

Bertha Y. Hebb.

According to a study of salary schedules for the year 1921-22 the cities upon the list below, 63 in number, offer the highest maximum salaries to their junior high school teachers of any cities having a population of 10,000 and over in the United States. The maximum salaries range from 2,000 per annum to 3,300, the highest being offered by the city of Cleveland Heights, Ohio. The next highest are those of Gary, Indiana, and New York, New York, namely \$3,250 each; and next Cleveland, and Youngstown, Ohio, \$3,000 each. The length of time required to reach the maximum for the cities under consideration is from five to sixteen years, but the most frequent custom in this regard is promotion to the maximum salary the eighth or tenth year.

The following is a list of these generously inclined cities, together with the maximum and minimum salary for each, and the number of years required to reach the maximum:

City.	Maximum.	Minimum.	Years to reach maximum.
Arkansas:			
Ft. Smith	\$1000	\$2000	8
California:			
Eureka	1600	2300	7
Long Beach	1600	2200	11
Los Angeles	1800	2600	—
Pasadena	1800	2600	8
Oakland	1620	2160	10
Santa Cruz	1980	2376	—
Colorado:			
Denver	1200	2310	—
Connecticut:			
Naugatuck	1200	2500	16
New Britain	1150	2500	10
Torrington	1350	2230	—
District of Columbia:			
Washington	1200	2240	10
Indiana:			
E. Chicago	1400	2300	—
Gary	—	3250	9
Logansport	1450	2000	5
Iowa:			
Sioux City	1320	2100	5
Kansas:			
Salina	1200	2000	5
Massachusetts:			
Haverhill	1000	2000	—
Springfield	—	2200	—

(Concluded on Page 134)

School Buildings and Business

F. W. Hart, Associate Professor Educational Administration, University of California

School authorities and architects have gotten together. Procedure has been developed that assures agreeable working relations and guarantees a building that will meet the full educational demands placed upon it. The educational demands have been formulated and standardized in the light of the best modern practice and forms have been developed that make possible the realization of these standards.

More than one hundred architects experienced in the field of schoolhouse planning have, in cooperation with leading educational authorities, contributed to the study which has resulted in the publication of the Strayer, Engelhardt and Hart Schoolhousing Series.

Form No. 1 of this series is designed to enable a school board to render a clear-cut business-like statement of their building needs to the architect of whom they are requesting preliminary sketches. It contains every item of knowledge concerning the proposed building which architects agree is necessary or desirable for them to have in order that they may proceed in an intelligent manner to solve the problem submitted to them. The form is prepared in blank and is adapted to any type of building. While its primary service is that of enabling architects to proceed with sketches in full knowledge of the demands to be made upon the building, it also serves as a guide to the superintendent and school board for formulating their problem in their own minds.

In filling out the form the superintendent and board will be required to consider and agree upon every item relating to the educational service to be rendered by the proposed building. Having thus considered the problem item by item as they are suggested in the form, gross errors or omissions are made impossible and increased vision is assured. The resulting building will be better adapted to the needs and will serve its needs for a longer period without alterations and additions.

Illustrations No. 1, 2, 3 and 4 are typical pages of this 27 page form.

The second form of this series (Form No. II), is arranged so as to permit architect and school board to discuss and make a record of all of the data which are essential to the final plans and specifications which the architect is to prepare. On this form may be recorded the materials to be used in the various parts of construction; the details of construction and the arrangement affecting educational utility; facts involving the school program; and the nature and extent of the community service tendered by the proposed buildings.

It is intended to be used after the architect has been employed by the school board. In conference between the school board and the employed architect, this form will suggest every important item which should be considered and discussed and tentatively agreed upon by both parties concerned. The form also provides a convenient means for recording these tentative agreements and any other essential data.

When the items which are listed in the form have once been considered by the architect and the school board, it will be found that this form will reduce to a minimum the number of conferences, discussions and inquiries concerning the building. It is clear that this form, when used in conference as outlined above, will obviate misunderstandings and will eliminate the frequent redrafting of plans.

The data which are recorded in this form are of mutual concern to both the architect and the

owner, and are considered essential to the preparation of the final plans and specifications. No part of this memorandum shall, however, be considered to constitute a contract or to be binding to either party further than obligating each to a maximum of effort to solve the problems which arise in the most satisfactory manner.

Illustrations No. 5, 6 and 7 are typical of this 29 page form.

Form No. III is arranged to provide a convenient checking chart and score card for school building plans and specifications. More than one-half of the states now require that all plans for new school buildings shall be approved by some state or county school official. In many instances this approval has been purely perfunctory and in consequence has not served to eliminate even the most flagrant abuses or obvious errors. This regrettable fact has been due in large part to the lack of any well-adapted form against which the plans might be checked and measured.

Form No. III of this series provides just such a device. In the hands of a competent clerk who is familiar with the standards, accurate and complete checking and scoring becomes a comparatively small matter. With the extensive use of these forms required approval will cease to be a perfunctory matter. The service rendered will be of mutual concern to both school officials and architect.

The latter will profit by the detailed criticism of his plans and with exact knowledge of defects he will be able, with a minimum further study and a maximum of certainty to make his plans conform to the standards acceptable to the school officials. The school officials will profit by producing school buildings in which the maximum educational utility is assured.

Form No. IV also embodying the consensus of judgment of this same group of architects, is a set of standards for the form, scale and content of school building plans. The endless variety in form and content of plans now prepared makes accurate checking exceedingly difficult and extremely uncertain. If all plans are made to conform to an accepted standard, the problems would be greatly clarified for both parties concerned. Architects could proceed with a feeling of security that they were showing all the facts required and with knowledge of the fact that their blueprints would be correctly interpreted.

In the development of the standards many architects of the highest professional standing were exceedingly hopeful of the mutual benefits to be derived from such a standardization.

The fifth form in the series is a standard form of agreement for architectural competitions, where such are required, or for special reasons seem desirable. It is the purpose of this form to safeguard the interests of both the school authorities and the competing architect.

The book of standards which is intended to supply information necessary to facilitate the use of the forms is developed in the form of a standard state school building code. It presents in code form convenient for reference detailed standards of modern school housing from the point of view of educational utility, health and safety of the school plant.

In drafting the code the authors have endeavored to evaluate and organize the standards in existing state and city school building codes and to supplement such sources by the standards established by such agencies as the

National Board of Fire Underwriters, the National Fire Protection Association, National Society of Heating and Ventilating Engineers, National Society of Illuminating Engineers, and other similar organizations.

The extensive use of these forms in conjunction with the standards established should mark a big advance in the educational utility of school buildings and the promotion of higher professional business relations between school authorities and school architects.

INSTRUCTIONS TO SCHOOL AUTHORITIES

1. Check in the column of circles on the left every item that applies to the building you are contemplating.
2. Fill in the data required under the items checked.
3. Mark with the letter "A" all items which you wish to leave to the discretion of the architect.

I. Type of School:

1. ☐ High or secondary, housing grades.....to.....inc.
2. ☐ Intermediate or Junior High, housing grades.....to.....inc.
3. ☐ City Elementary, housing Kindergarten and grades.....to.....inc.
4. ☐ Combination of Elementary and High, grades.....to.....inc.
5. ☐ Rural Elementary, housing grades.....to.....inc.
6. ☐ Trade and Industrial, housing Day School.....
7. ☐ Night School.....

II. Class of Construction:

7. ☐ Class A—A building constructed entirely of fire resistive materials, including its roof, windows, doors, floors and finish.
8. ☐ Class B—A building of fire resistive construction in its walls, floors, stairways, and ceilings, but with wood finish, wood or composition floor surface, and wood roof construction over fire resistive ceiling.
9. ☐ Class C—A building with masonry walls, fire resistive corridors and stairways, but with ordinary construction otherwise, i. e., combustible floors, partitions, roofs and finish.
10. ☐ Class D—A building with masonry walls, but otherwise ordinary or joist construction and wood finish.
11. ☐ Class E—A frame building constructed with wood above foundation with or without slate or other semireproof material on roof.

III. Work to be Included in Building Contracts:

12. ☐ Grading of entire site.
13. ☐ Grading only around building.
14. ☐ Approaches, drives, sidewalks, etc.
15. ☐ Furnishing and equipping building.
16. ☐ Lighting and fixtures.

IV. Money Available for:

17. ☐ Site.....\$.....
18. ☐ Building.....\$.....
19. ☐ Improvement of Grounds.....\$.....
20. ☐ Architect's and Engineer's Fees.....\$.....
21. ☐ Superintendent of Construction.....\$.....
22. ☐ Furniture and Equipment.....\$.....
23. ☐ Surplus for Contingencies.....\$.....
24. ☐ Total.....\$.....

V. Time Limits:

25. ☐ Architect to be selected.....date.....
26. ☐ Preliminary plans due.....date.....
27. ☐ Working drawings and specification due.....(approximate date).....
28. ☐ Contract to be let by.....(approximate date).....
29. ☐ Actual work to begin.....(approximate date).....
30. ☐ Building to be completed by.....(approximate date).....

VI. Legal Restrictions and Regulations:

31. ☐ Marked copies of state and local laws and regulations submitted herewith.
32. ☐ Plans and specifications must be approved by.....

VII. Climatic Conditions of Community:

33. ☐ Lowest temperature in winter.....
34. ☐ Highest temperature during school months.....
35. ☐ Mean temperature for January.....
36. ☐ Mean temperature for September.....
37. ☐ Annual rainfall.....Depth of heaviest snows.....
38. ☐ Maximum velocity of winds.....

VIII. Provisions for Future Extension:

39. ☐ Plan building as a completed whole.
40. ☐ Plan building as one unit of.....room school.
41. ☐ Show projected extensions in plans.

IX. Building Site:

42. ☐ Size—length.....ft.; wide.....ft.
43. ☐ Environment—describe briefly and attach photographs.....
44. ☐ Topography—map attached showing shape, dimensions....., contours....., streets....., water mains....., electric mains....., kind of current....., location and depth of sewers....., gas mains....., location and size of existing buildings....., trees....., points of the compass....., facing of building....., survey and grade stakes.....
45. ☐ Soil—Nature of surface soil....., nature of sub-soil....., depth of water table.....ft., depth at which rock is encountered....., nature of such rock.....

X. Building-Placement:

46. ☐ Orientation:—Face building so as to secure maximum number of classrooms lighted from S. East....., East....., S. West....., West.....
47. ☐ Position on Site:—Preserve maximum play space.....allow for future additions.....
48. ☐ Height in stories.....
49. ☐ Basement.....depth below grade.....

(Continued on Page 137)

Testing the Heating and Ventilation of School Buildings

Edwin S. Hallett, Chief Engineer, Board of Education, St. Louis, Mo.

No question has been more perplexing than the determination of the effectiveness of the ventilation of school buildings. It is just as natural to the average man to assume expert knowledge of ventilation as of the weather, and the results of such judgment are no better. The more recent development of the heating and ventilating apparatus of school buildings is based upon strictly scientific principles, wherein are incorporated the findings of the chemist, the physicist and the physician.

While the air conditions in a room must impart a sense of perfect comfort, there are very important elements that may affect the health and bodily vigor which do not attract attention from the senses. This is especially true of the condition resulting from the presence of microscopic dust, and the bacteria which are carried by the dust. It may be truly asserted that many odors, such as are commonly found in old school buildings, become unconscious evils to the regular occupants. While the absence of proper humidity is reflected in the sense of uncomfortable temperature, it also greatly effects the hygienic condition of the mucous membranes of the occupants. Another feature of good ventilation that is not well understood by teachers is the continuous air motion in the classroom. If a thousand teachers were asked for a definition of good schoolroom ventilation the thousand answers would not dwell to any large extent upon the elements enumerated above. The terms "stuffy," "foul," and "devitalized" would predominate. These terms do not mean anything until they have been analyzed in terms of the foregoing elements. A very large percent of the complaints of "stuffy" rooms are due to being too warm; another small group to being too warm without air motion, and still another, mostly in down-town schools, complaint of stuffiness meaning bad odors.

It was with a view to clarifying this situation that the American Society at its meeting in St. Louis in 1920 adopted the "synthetic air chart" devised by Dr. E. V. Hill for the purpose of setting up correct standards of good ventilation. Until this standard chart was officially adopted there was no means of making a test that could have any value because there had been no common ground of comparison. Real progress in many of the sciences mark their beginnings with the adoption of a method of testing. For example improvements in the steam engine began with the invention of the steam indicator for testing them. Dairy farmers date their awakening with the invention of the Babcock centrifuge milk tester; the physician uses a standard set-up in making tests on the patient in

diagnosing many diseases. It may likewise be said that the adoption of a standard of ventilation and the provision of means for making the tests marks a new era in this science. The information concerning these tests and the significance of the data to the school teachers are matters that should receive the attention of all educators. Publicity that shall be interesting to the teacher and that would enlist her co-operation in improvements should be undertaken.

What Is Good Ventilation?

Briefly there are seven tests to be made in determining the merit of the ventilation and a rating in percentage to determine the over-all efficiency. A sample chart giving the rating of one of the St. Louis schools will aid in understanding the test. It will be noted that in the first column under "wet bulb" there are three divisions, graduated so that 100% will represent the ideal of 56 degrees wet bulb without air motion. The wet and dry bulb difference is found in the middle, the percentage at the left and the amount penalized on the right.

To Make the Test.

The temperature, humidity and air motion are inter-related as will be seen from the chart. The sling psychrometer which holds a wet bulb and dry bulb thermometer is most accurate and convenient. The amount of air motion is best determined by an anemometer for velocities down to about 50 ft. per minute. The smoke test will indicate the direction and general distribution. The velocities can be estimated in various parts of the room. The writer has made many photographs of smoke tests, the exposures being made one a minute and the series brought together.

Really the high humidity is advantageous provided the temperature can be controlled downward to correspond.

Dust Count.

The dust determinations are best made by taking the sample in the room through an instrument like an air pump in which is enclosed a glass slip coated with an adhesive substance such as Canada balsam or vaseline and the air made to impinge upon this substance. Dr. Hill's instrument is standard and very convenient. The glass slip when taken out is pressed against another slip and thus sealed for counting. The counting is done on a compound microscope by means of a ruled glass fitted to the eye piece and the result reduced to the cubic foot basis as directed in Dr. Hill's instructions.

Bacteria and Odors.

The American Public Health Association has formulated rules for making bacterial determinations. Round Petri dishes, four inches in

diameter, are coated with agar sterilized and then exposed in the room, say in four stations at once for two minutes. The covers are then replaced and the dishes returned to the laboratory where they are incubated for 48 hours at 22 degrees Cent. and the colonies counted.

Odors are not determined by the use of any apparatus for the good reason that nothing has yet been devised for that purpose. A person to judge the odors of a schoolroom should be one of good odor sense and not accustomed to be in schoolhouses. He should go quickly from the out doors to the room to be judged. Ratings from 95 to 100 per cent is very faint; from 90 to 95 per cent faint; 85 to 90 per cent noticeable; 80 to 85 per cent distinct.

Carbon Dioxide.

The apparatus for taking their samples for CO₂ determinations are quite simple but the chemical process of treating the sample for the small amounts found in ventilation are quite difficult and not often possible in a high school laboratory.

The bottles of 120 c.c. capacity with rubber stoppers are best. They are filled by moving the air with a constant pressure rubber bulb as shown in Figure 4. It is necessary to repeat the operation of filling a number of times to be sure of a perfect sample. The research laboratory of the American Society of Heating and Ventilating Engineers at Pittsburgh has devised and improved apparatus for making CO₂ determinations of low content.

The distribution of air in the room is determined by the CO₂ readings from samples taken in the various parts of the room. The high readings of course indicate low air motion.

Other Injurious Substances.

The use of a column for recording the presence of substances resulting from processes and materials used in industries and laboratories is necessary. Carbon monoxide is so poisonous that .05 of one per cent produces death. In rating this column air free from CO, as one hundred per cent and air containing two parts in 10,000 as zero per cent and one part as 50 per cent, 1 1/2 parts as 25 per cent, etc.

Recording the Results.

Professor Allen illustrated a test by the following sample record: "The average results in a room are found as follows:

Dry bulb temperature—72 degrees.
Wet bulb temperature—58 degrees.
Air Motion—20 ft. per minute.
Physical state—light work.
Dust—10,000 particles per cu. ft.
Bacteria—10 colonies on a two minute plate.
Odors—90 per cent free from.
CO₂—seven parts per 10,000.
Other injurious substances—none.
Distribution—81.4.

These values are now represented on the chart by a 1/8" vertical line drawn in the center of (Concluded on Page 126)

TEST DATA											
STREET NO. 4221 SHAW AVE. ST. LOUIS, MO.										DATE APRIL 19, 1921	
BLDG. MULLANDY ROOM NO. 3 FLOOR 2										TIME 10:40 AM to 11:40 AM	
STATION	TEMPERATURE	WET BULB	R.H. %	AIR MOTION	DUST	BACTERIA	ODORS	CO ₂	SUPPLY REGISTERS	EXHAUST REGISTERS	
1	70	61	59	35	5400	4	100	75	6.1	249	1518
2	69	59	55	35	4080	2	100	92			
3	68	60	62	35	6150	17	100	70		1.4	214
4	68	60	62	35	6900	8	100	72			
5					7010	7		64			
6	SAMPLES 5-7-8 WERE				8600	10		86			
7	OBTAINED IN THE				4950	15					
8	AFTERNOON										
9								74			
10	69	60	59	35	6151	82	100	77		1518	1123
PRIMARY SENSE IMPRESSION GOOD NOTES: BACTERIA PLATE NO. 9 EXPOSED THREE MINUTES. APPROXIMATELY 64% OF AIR WAS BEING RECIRCULATED. SAMPLES 1-2-3-4 WERE OBTAINED IN THE MORNING.											
NO. OCCUPANTS		49		WINDOWS NO.		5		RADIATORS		WEATHER CLEAR	
PHYSICAL STATE		REST		TYPE SLIDING SASH				TYPE SQ. FT.		TEMP. DRY TO WET 15.2 H. 38	
AIR SPACE PER OCCUPANT		18.8		AREA 39 FT. 176		NO DIRECT		WIND DIR E. VEL 6		7% Per Hr.	
TOTAL AIR SUPPLY BY CO ₂ PER MIN.		125.8		LEAKAGE 34.8		RAD. TION		CHECKED COMPARISON ON VENTILATION			
AIR SUPPLY PER OCCUPANT BY CO ₂		2.57		RATIO TO CU. CONTENT 1:52		IN		TEST BY E. S. H. A. L.			
FAN		31.0		FLOOR AREA PER PERSON 15.6		ROOM		APPROVED BY C. W. K. A.			
AIR DISTRIBUTION %		91.6									

FIG. 1. FRONT OF TEST RECORD CARD.

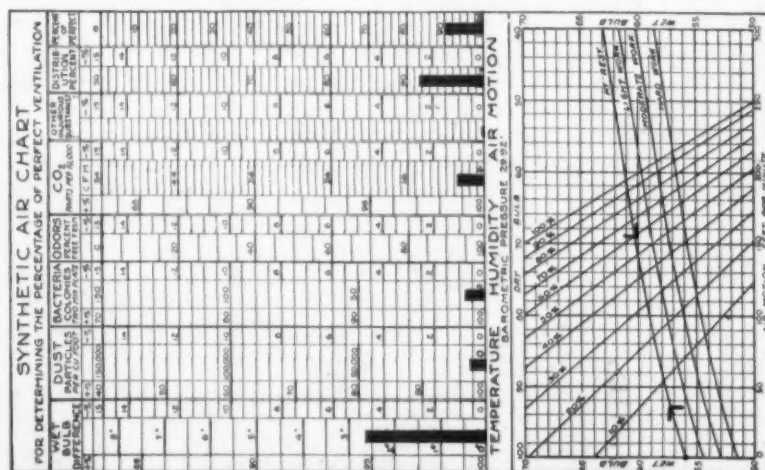
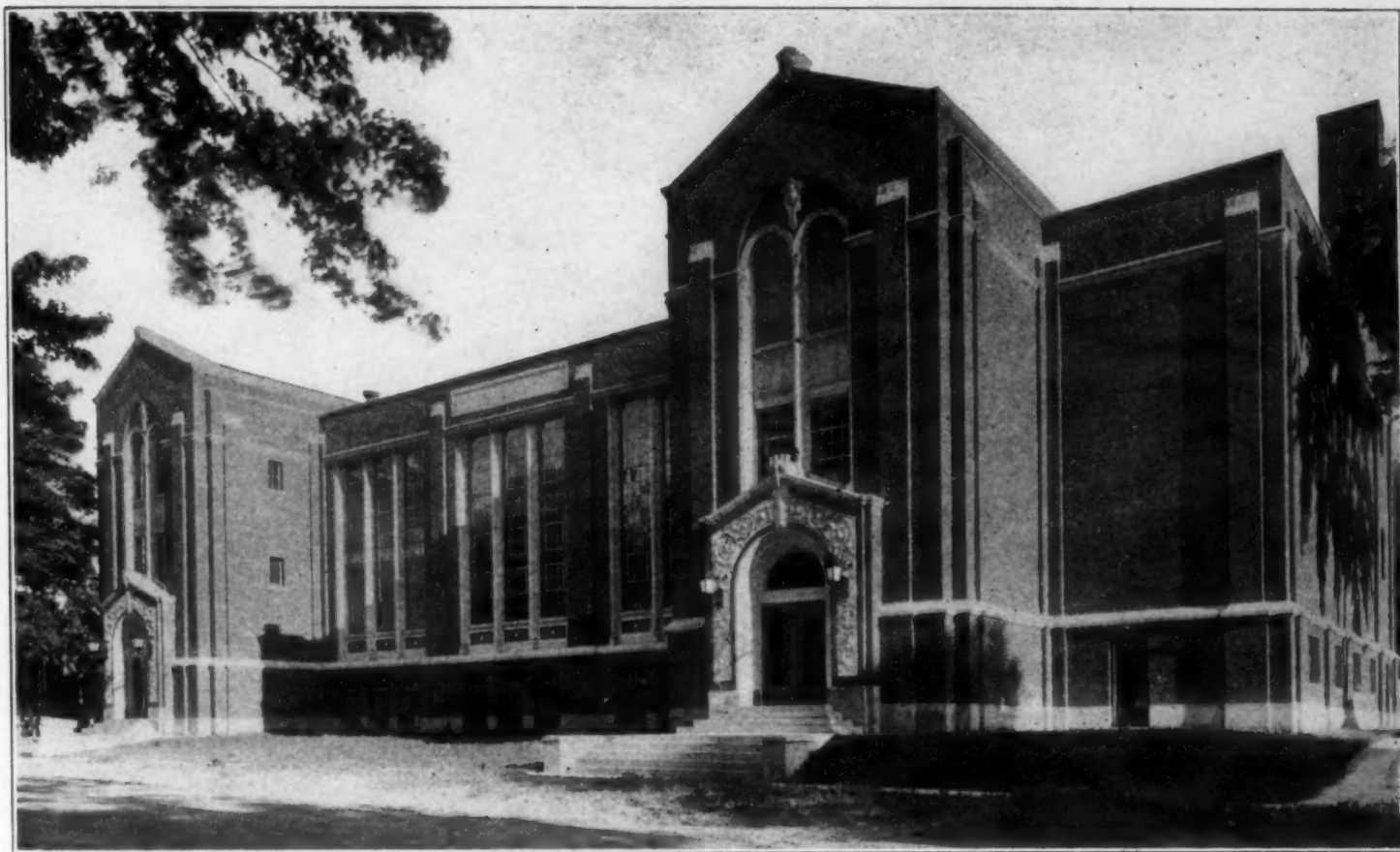


FIG. 2. BACK OF TEST RECORD CARD.



BALDWIN HIGH SCHOOL, BIRMINGHAM, MICH.
Van Leyen, Schilling, Keough & Reynolds, Architects.

Interesting Michigan School Buildings

Recent Work of Van Leyen, Schilling, Keough & Reynolds, Architects and Engineers.

Planning and supervision of school buildings, embracing practically every type from the most comprehensive high school in a large city to the most modest little schoolhouse in a rural community, and numbering upwards of 250 separate structures has been the rather unusual experience of the Detroit firm of Van Leyen, Schilling, Keough & Reynolds. As architects and engineers, the firm has done this immense amount of work in the states of Michigan and Ohio and in the province of Ontario during a period of 35 years. The firm can trace in its own files the development of American school architecture of the Middle West from the middle eighties, when buildings were simply collections of classrooms, to the present day when the development of the American school system requires the most complicated type of plant, with study and recitation rooms, shops, laboratories, play and exercise rooms, etc.

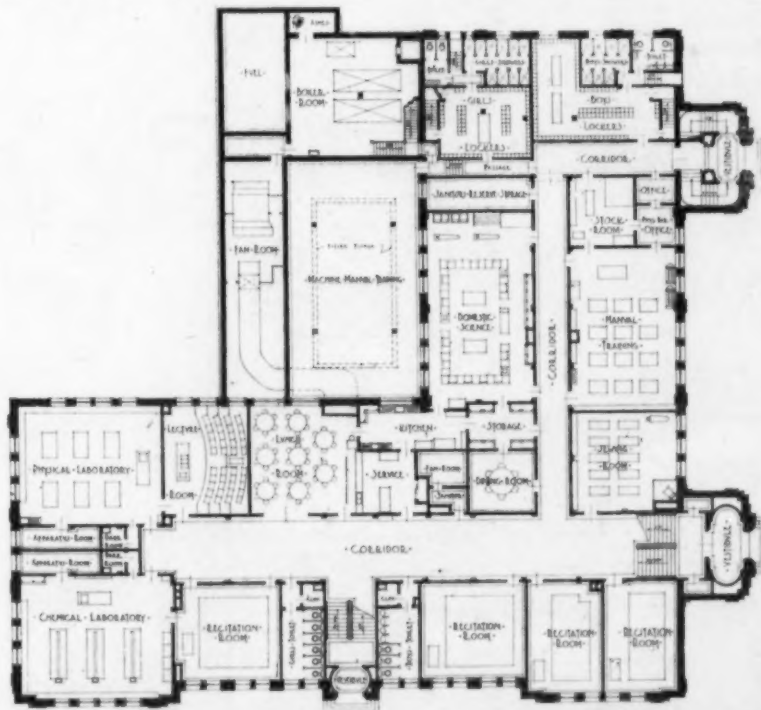
In the subsequent pages are illustrated four typical plants built in the state of Michigan during the past year. Mr. Van Leyen, senior member of the firm, realized early in his school planning career that the problem which proper school planning, design and construction, presented to the architect, required considerable specialization along certain professional lines. He, therefore, sought to build an architectural and engineering organization of specialists, who might properly analyze each problem presented and execute the same with such understanding and thoroughness as could be expected from men specializing in the professions. This single-minded purpose brought about the formation of the present organization specializing in school planning.

The firm is organized to insure the proper correlation of all the types of engineering and architectural service which school planning problems involve. For each building the civil and structural engineering is planned along

with the mechanical, all factors working within the same organization and under the same direction to give the client a complete, well-balanced and economical building. Under the same management and as a part of the same organization there is a most thorough supervision of construction so that school boards may have positive assurance against misunderstandings and poor workmanship in the erection of a given building. Through its long experience the firm has been led to thoroughly appreciate that the original basis for every school plan must be the educational needs and processes. With this in mind, the original facts for each building are the educational

plan and program of the superintendent and of his educational staff, which the architects translate into terms of building accommodations and equipment.

The state of Michigan is most fortunate in having good school laws. The department of public instruction at Lansing is insistent upon the best that can be had in the way of proper planning and places particular stress upon those functions of a building which have to do with light, heat, ventilation and sanitation thereby guarding the health of the child. Insistence upon these points by the department has engendered a spirit of cooperation between the department and the architects of the state,



GROUND FLOOR PLAN, BALDWIN HIGH SCHOOL, BIRMINGHAM, MICH.



BALDWIN HIGH SCHOOL, BIRMINGHAM, MICH.
Van Leyen, Schilling, Keough & Reynolds, Architects, Detroit.

which insures the public the best in modern school practice.

The River Rouge High School plans, which are illustrated herein, typify the modern high school as designed by the firm. This community which is a fast-growing suburb of Detroit, has felt the need for greater educational and community facilities. The building is of the enclosed court type. The ground floor embraces the usual industrial training, domestic training and science rooms. The arrangement of gymnasium, plunge, shower and locker rooms is particularly noteworthy. Shower and locker rooms located between the plunge and the gymnasiums on either side give direct communication and facilitate ease of control. On the boys' side the cadet room is within easy communication with the gymnasium.

Recitation, study and classrooms throughout are well lighted. The roof provides a greenhouse, which communicates with the agricultural room by means of a staircase. There is

also provided on the roof an open-air room, with separate communication to the outside and to the other floors by means of an elevator and staircase. This open-air room has facilities for the scientific care of under-nourished and sickly children.

The mechanical and electrical equipment of the building is in accordance with the best in modern practice. The boiler room has a mechanical stoker and storage system, which reduces the handling of fuel to a minimum. Mechanical ventilation serves each and every part of the entire building.

The Baldwin High School, erected at Birmingham, Mich., provides ideal high school accommodations for this community. On the ground floor there are a science laboratory, four recitation rooms, a students' cafeteria, domestic science and sewing rooms, a wood working shop, a large machine shop, locker and shower rooms, etc.

On the first floor there is a large combination auditorium-gymnasium complete in its appointments for both general assembly and physical education purposes. The room effects a large saving in cost and has been found to give entire satisfaction for community as well as school purposes. The balance of the first floor is occupied by a study room, several recitation rooms, a classroom, a library, an office, etc. On the second floor there are a second study room, four recitation rooms, a classroom, a drawing room and an agricultural laboratory.

The building is fireproof and is arranged for ultimate enlargement to the rear of the space now occupied by the physical laboratory and the study rooms. The design is distinctly Romanesque and gives a rather unusual and pleasing character to the exterior.

The Durand High School, of which plans are shown, was designed and planned to serve

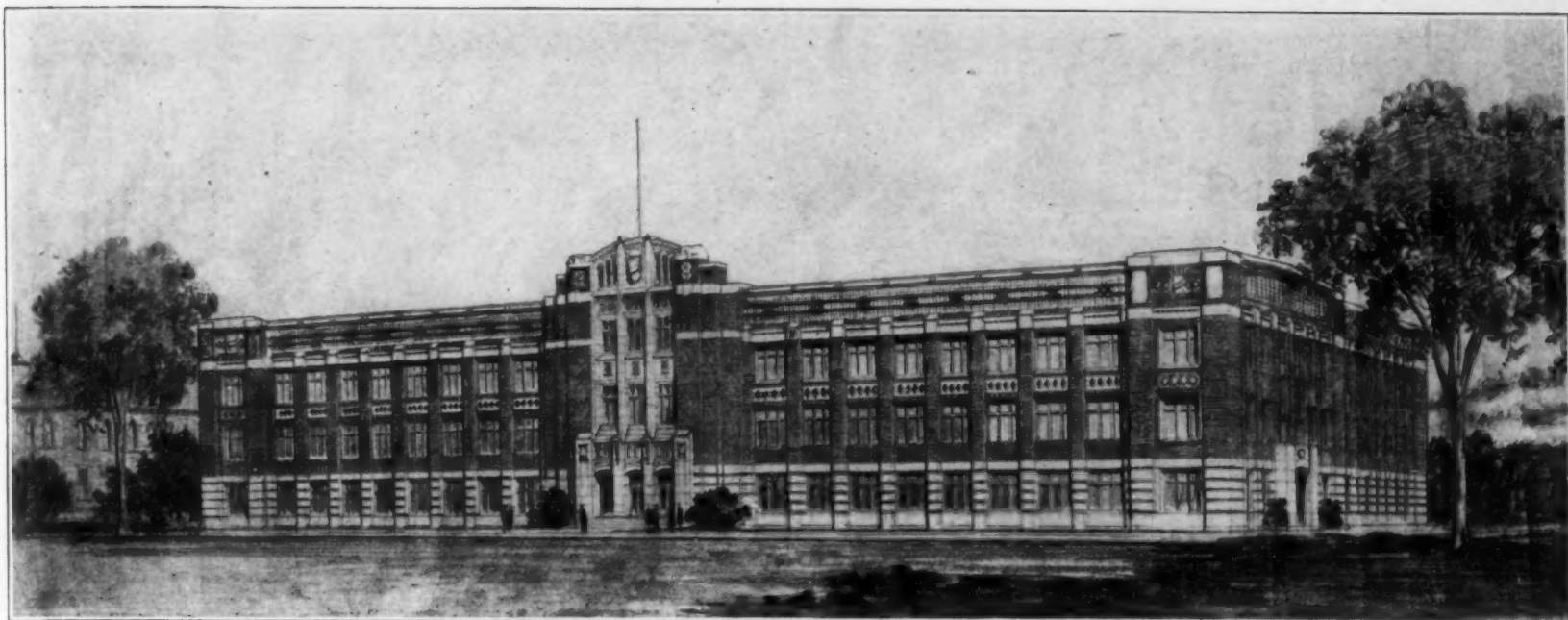


FIRST FLOOR PLAN.



SECOND FLOOR PLAN.

FLOOR PLANS, BALDWIN HIGH SCHOOL, BIRMINGHAM, MICH.



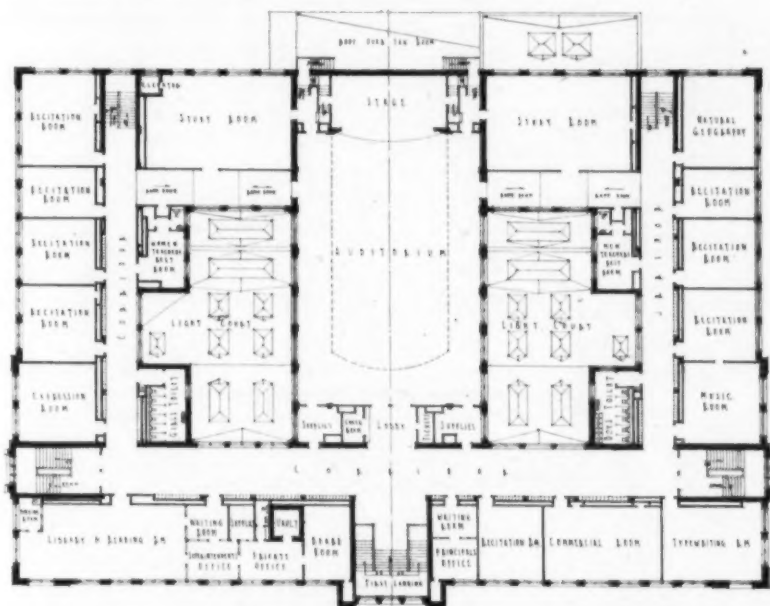
RIVER ROUGE HIGH SCHOOL, RIVER ROUGE, MICH.

the needs of a community which has grown slightly and which will not immediately require an extension of its school facilities. The building is carefully arranged, however, to allow for the extension of the wings parallel with the auditorium.

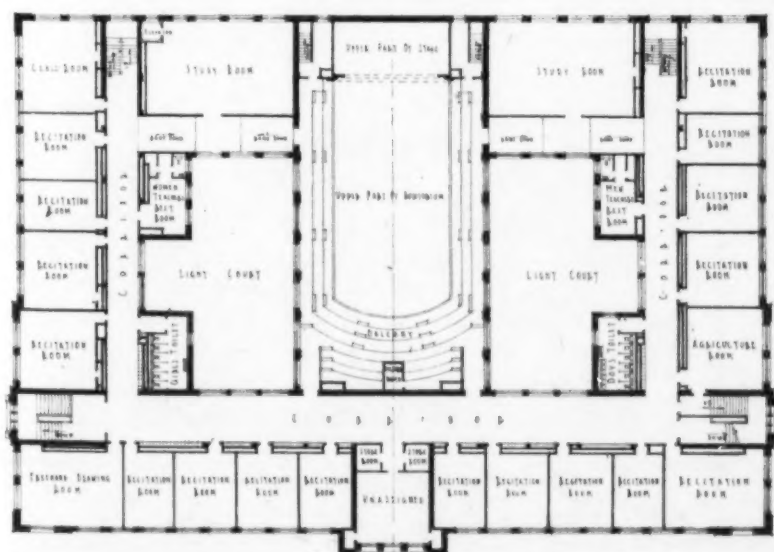
The ground floor contains in the front, between the entrances, the science laboratories and locker room. The respective ends are occupied by the manual training, domestic arts and lunch rooms. The auditorium is suited

for gymnasium uses and is arranged so that access is had to it immediately from the space occupied by the shower and locker rooms. The

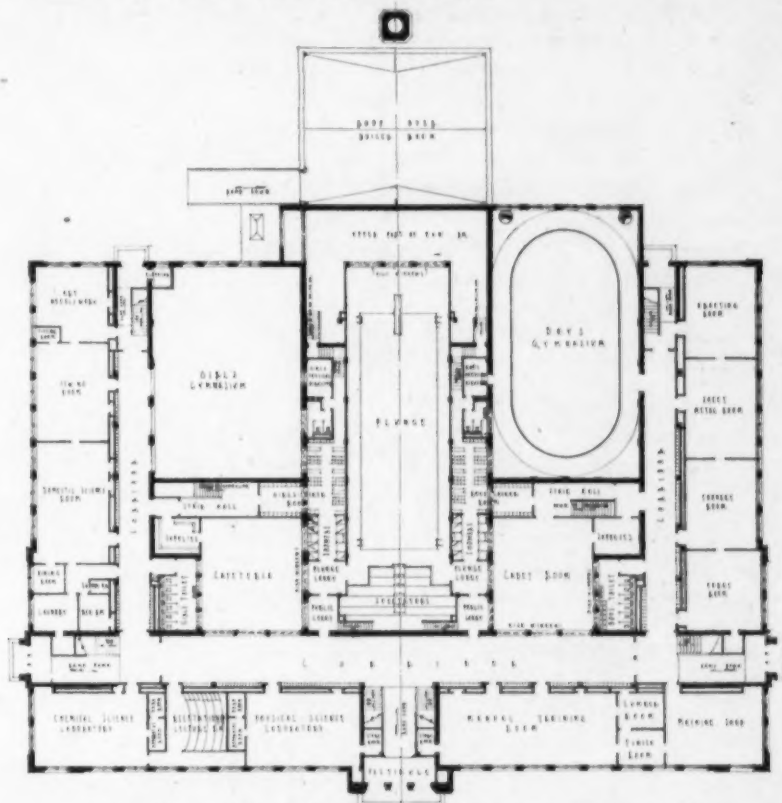
entire first floor is given up to classrooms for the grades, to space for the administrative offices and the library.



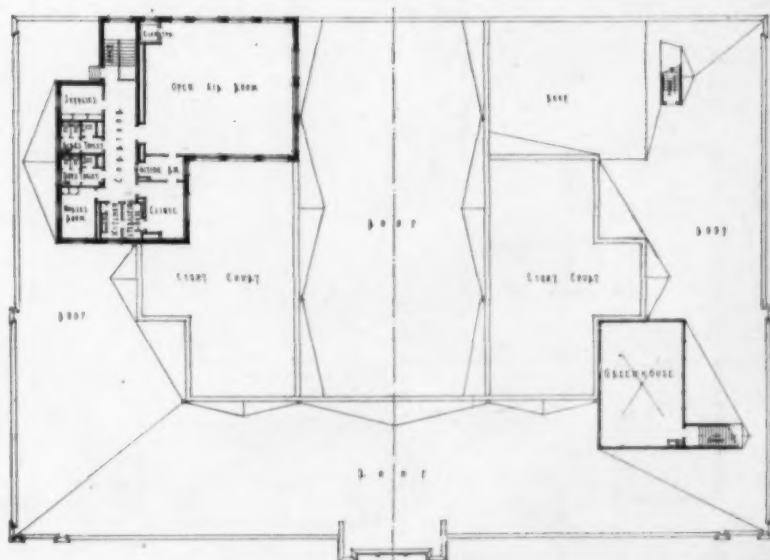
FIRST FLOOR PLAN, HIGH SCHOOL, RIVER ROUGE, MICH.



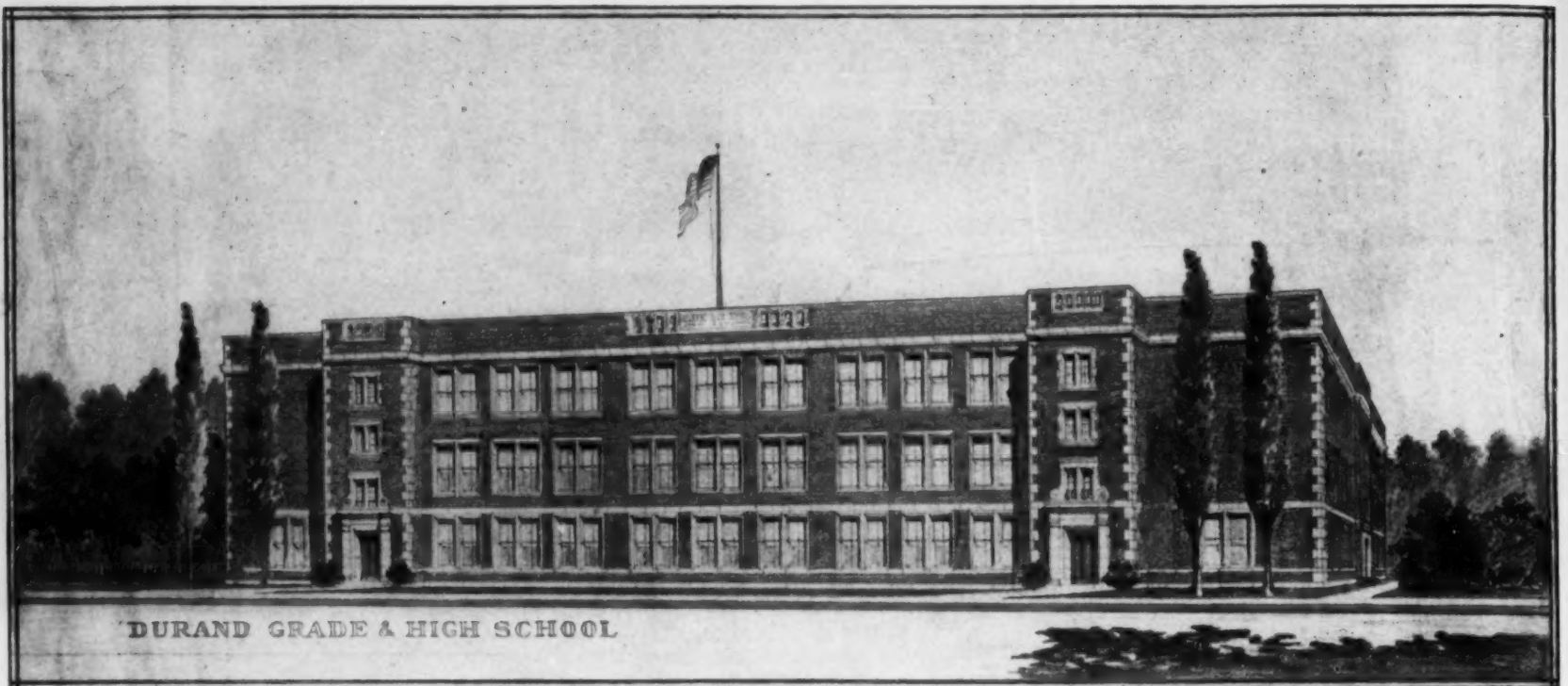
SECOND FLOOR PLAN, HIGH SCHOOL, RIVER ROUGE, MICH.



GROUND FLOOR PLAN, HIGH SCHOOL, RIVER ROUGE, MICH.



THIRD FLOOR AND ROOF PLAN, RIVER ROUGE HIGH SCHOOL, RIVER ROUGE, MICH.



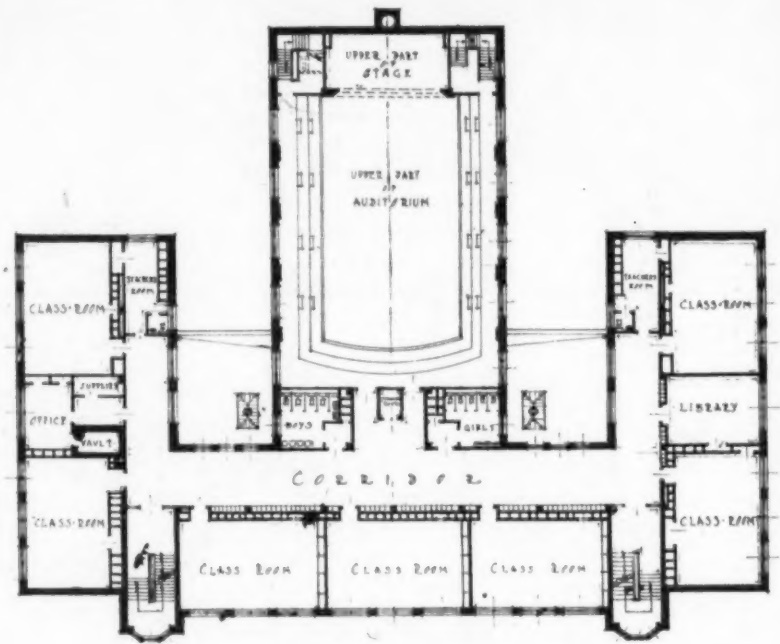
GRADE AND HIGH SCHOOL, DURAND, MICH.
Van Leyen, Schilling, Keough & Reynolds, Architects, Detroit, Mich.

The high school is located on the second floor where there are three large classrooms to each study hall, four recitation rooms, and two commercial rooms.

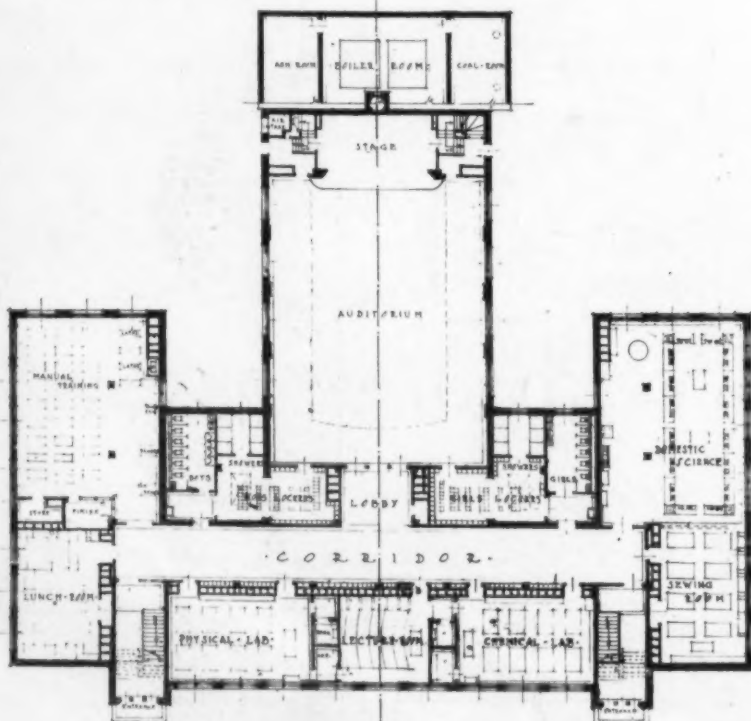
The building is fireproof and is completely equipped for all the mechanical, science and academic departments.

As a type of small rural school, the Royal Oak School, at Hickory Grove, is interesting. The building has been erected not only to meet present educational needs but to allow for the addition of four classrooms flanking the auditorium and adjoining the corridor.

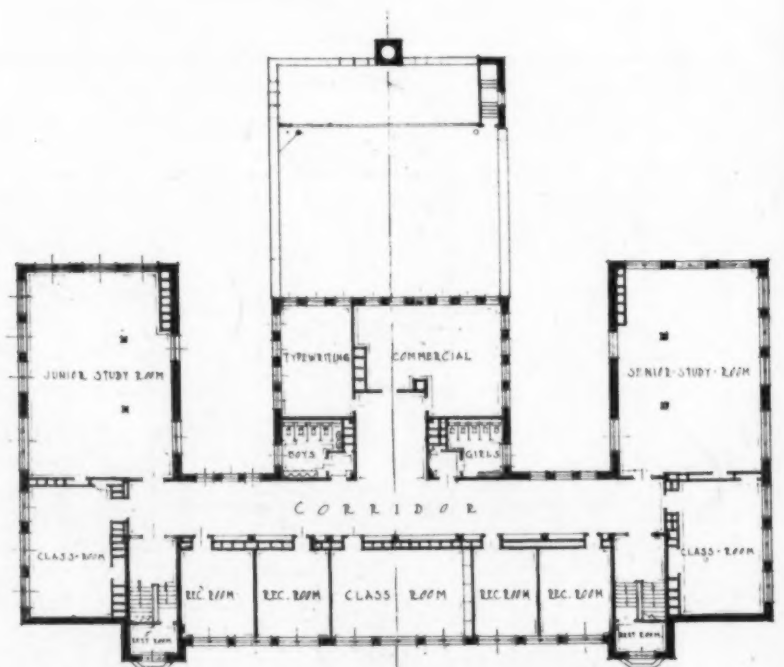
Since the completion of this building the state of Michigan has passed a rural school law, which enables three or more rural districts to consolidate for the purpose of building a rural high school. This makes a different problem of the rural school from both an architectural and an educational standpoint. It insures the rural communities, who wish to consolidate, the very best in educational opportunities and operates in such a manner



FIRST FLOOR PLAN
HIGH SCHOOL, DURAND, MICH.



GROUND FLOOR PLAN
HIGH SCHOOL, DURAND, MICH.



SECOND FLOOR PLAN
HIGH SCHOOL, DURAND, MICH.

that money is available for well-built, modernly equipped school buildings. A building of this type is being planned for Novi, Michigan, at this time and will be among the very first buildings of this type in the state.

Specializing in school buildings requires considerable versatility on the part of the architect, since one must be conversant with the state laws governing such buildings, and must possess as well a substantial understanding of educational requirements, which vary in accordance with the size of the community to be served, as well as with the degree of educational standards imposed.

THE GREELEY PLAN OF SUPERVISION.

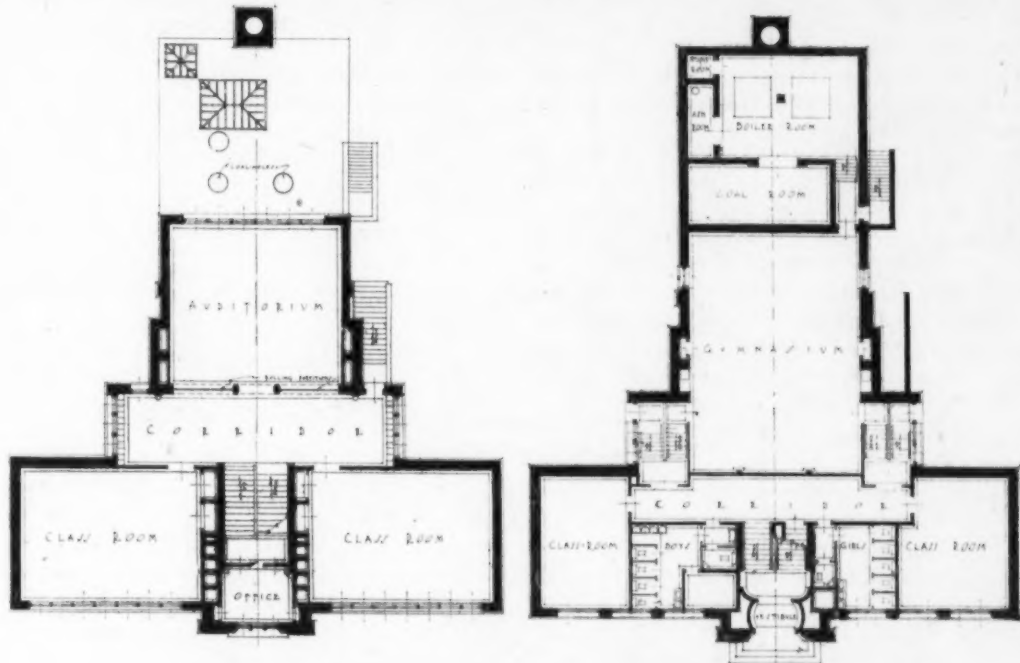
The schools of Greeley, Colorado, are working under a plan of supervision which has been in successful operation for the past six years. The plan calls for four supervisors in music, penmanship, art and physical training. These supervisors of special subjects are not under the direction of the grade supervisors nor of the principals, but all work together for a high standard of work.

The principal of the South Ward and Cameron Schools is an A. B. graduate of the Colorado State Teachers' College. This principal does not teach regularly but assumes charge of classes occasionally where a teacher is ill or where demonstrations of the work are in order. In addition to the duties of principal, the incumbent acts as grade supervisor for grades three and four throughout the city. Meetings are held frequently for all the teachers of those grades in four groups, the 3B teachers, 3A teachers, the 4B teachers, and the 4A teachers. Working together, the teachers in each group and the grade supervisor make the course of study. The grade supervisor visits each teacher under her supervision and assists her in keeping the work in shape. She has no regular days to visit nor any definite number of times she is expected to visit. The teachers' meetings are not scheduled regularly. The supervisor visits where and when she thinks she can do the most good, but she aims to be in each teacher's room at least once in each six weeks and each teacher makes a report of work accomplished in the six weeks' period.

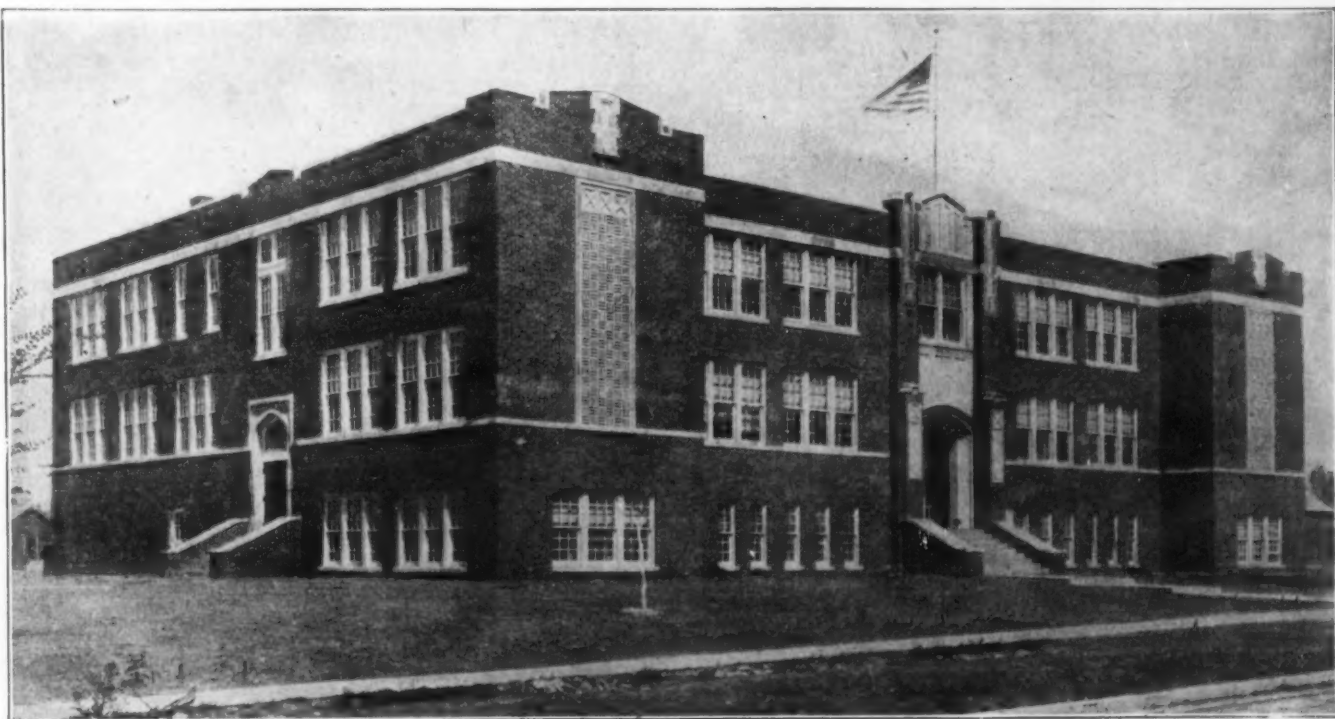
Under similar conditions, the principal of the North Ward School acts as grade supervisor for grades one and two and the principal of the East Side School as supervisor for



ROYAL OAK SCHOOL, HICKORY GROVE, MICH.
Van Leyen, Schilling, Keough & Reynolds, Architects.



SECOND FLOOR PLAN
FIRST FLOOR PLAN
FLOOR PLANS OF THE ROYAL OAK SCHOOL, HICKORY GROVE, MICH.



HIGH SCHOOL, CLAREMORE, OKLA.



ALTA VISTA SCHOOL, EL PASO, TEXAS. Trost & Trost, Architects, El Paso, Tex.

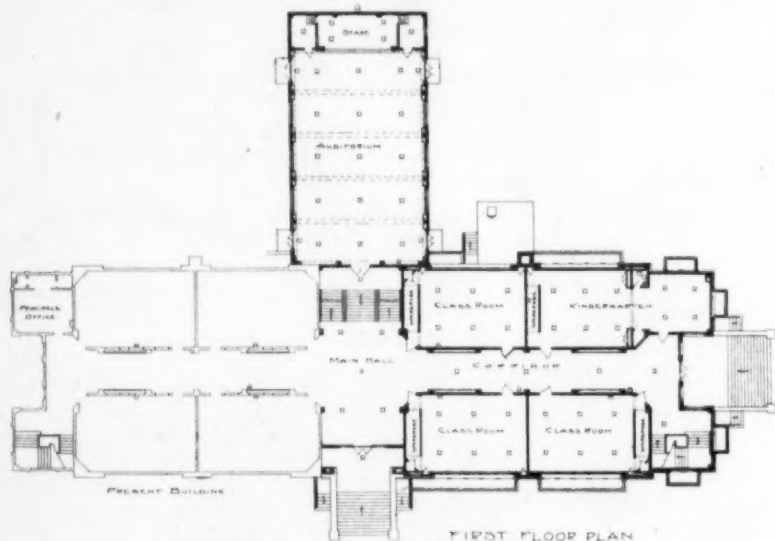
grades five and six. Grades seven, eight and nine are under the direct supervision of the junior-high-school principal.

Daily lesson plans are required by two of the supervisors but not by the others. The courses of study prepared by the teachers and grade supervisors are quite definitely outlined by six weeks' periods. The supervisors of special subjects teach at least once each six weeks for each teacher, and they also visit each teacher at least one other time within the six weeks. A number of visits are made by the

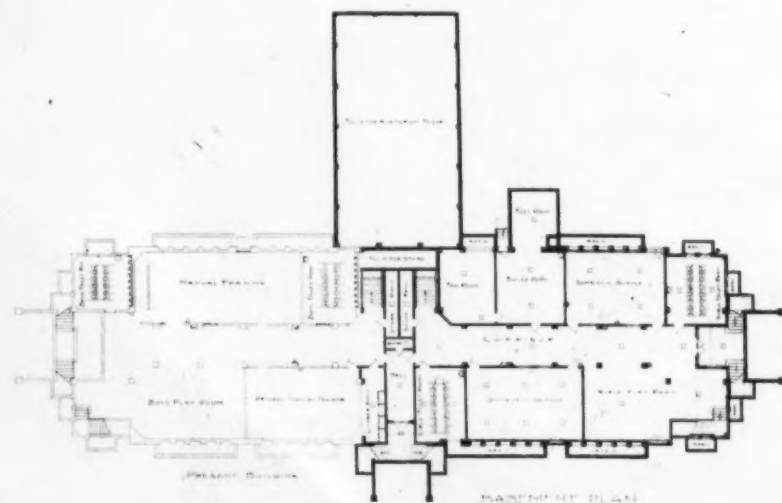
several teachers, the visits being planned and directed by the grade supervisors.

Since Greeley employs only 97 teachers, it is not believed the plan would work as effec-

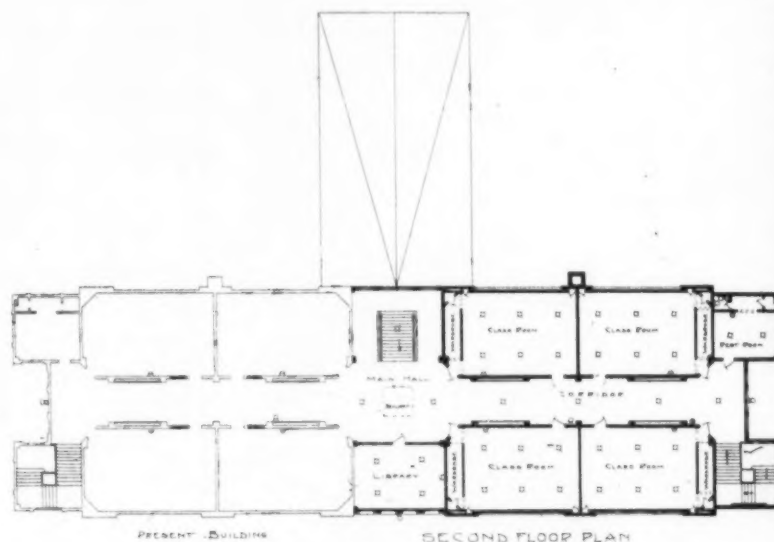
tively in a large city system. In Greeley it is giving excellent results in unity of work, in good feeling, and in a high standard of efficiency.



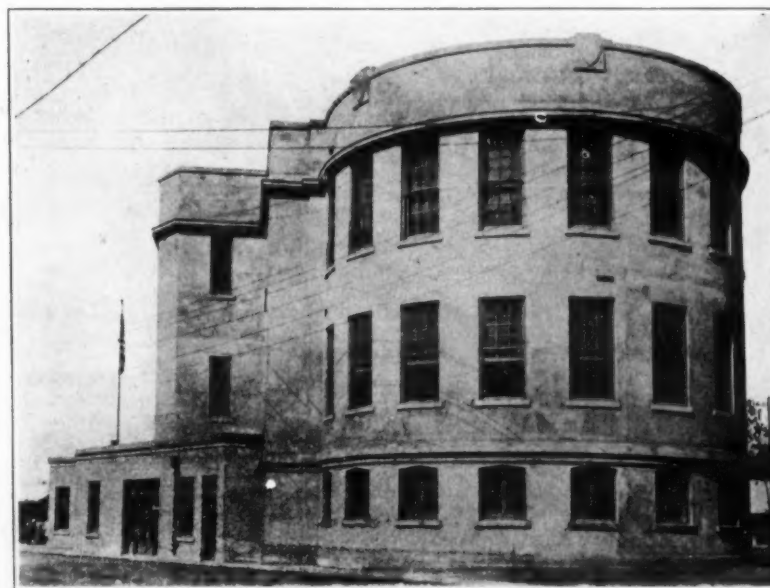
ALTA VISTA SCHOOL, EL PASO, TEX.



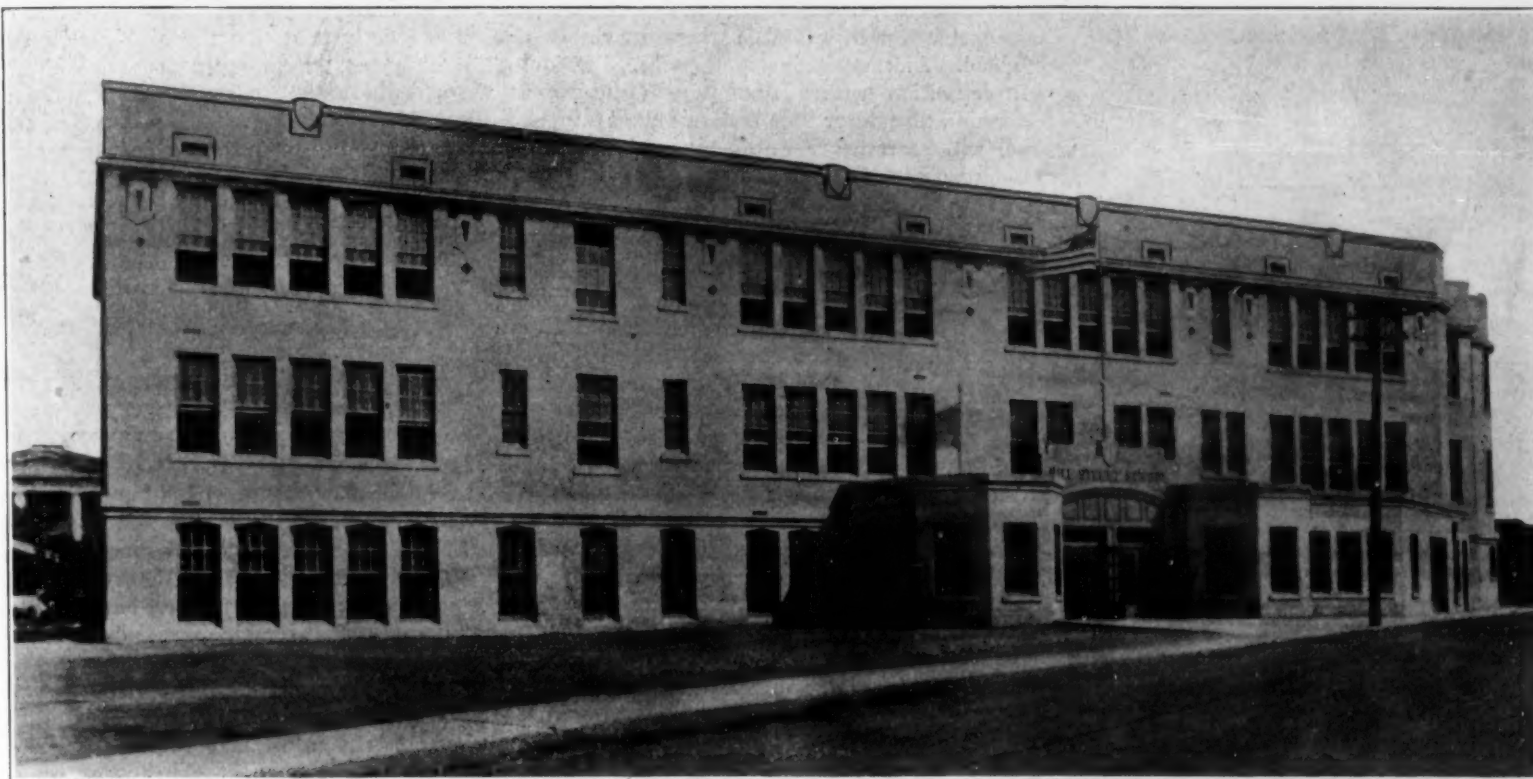
ALTA VISTA SCHOOL, EL PASO, TEX.



ALTA VISTA SCHOOL, EL PASO, TEX.



HILL STREET SCHOOL, GLOBE, ARIZ.
Trost & Trost, Architects, El Paso, Tex.



HILL STREET SCHOOL, GLOBE, ARIZ. Trost & Trost, Architects, El Paso, Tex.

HAS THE TEACHERS' AGENCY ANY RESPONSIBILITY FOR THE DEVELOPMENT OF A CODE OF PROFESSIONAL ETHICS FOR SCHOOL BOARDS AND SUPERINTENDENTS?

Supt. L. W. Stewart, Dowagiac, Mich.

The notion is prevalent among school authorities that there is an abundance of talent available for executive positions in the teaching profession. A good share of this impression is undoubtedly due to the wholesale method on the part of teachers' agencies of broadcasting such circular letters as the following:

The Nagishim Teachers' Bureau.

T. W. Poship, Manager Singlan, Nagishim,
March 3, 1922.

Mr. R. H. Nomisac,
The School Board,
Nogakop, Nagishim.

Dear Mr. Nomisac:—

We have in our Bureau listed the names of several good men. These men wish to step up from their present position and should your School Board be looking for a superintendent we would be pleased to have an opportunity to suggest the names of one or two candidates.

Give us a chance to render service to you with no expense on your part, except to notify us by means of the enclosed stamped envelope, whether or not, you expect a change in the position of superintendency. Also, if you have any other positions we could likely be of service to you in this connection.

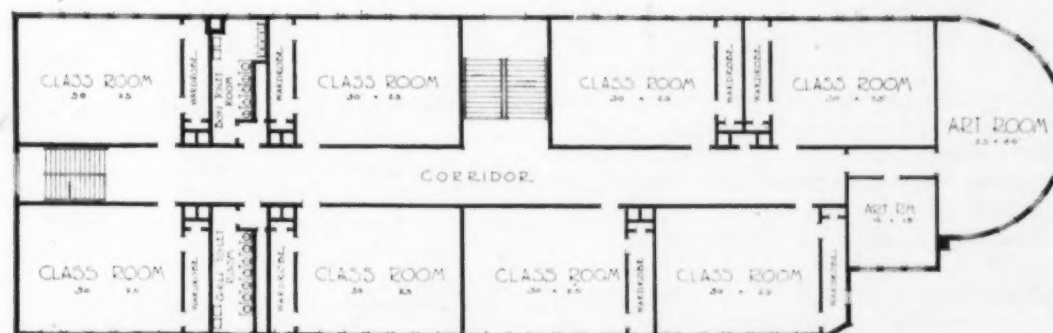
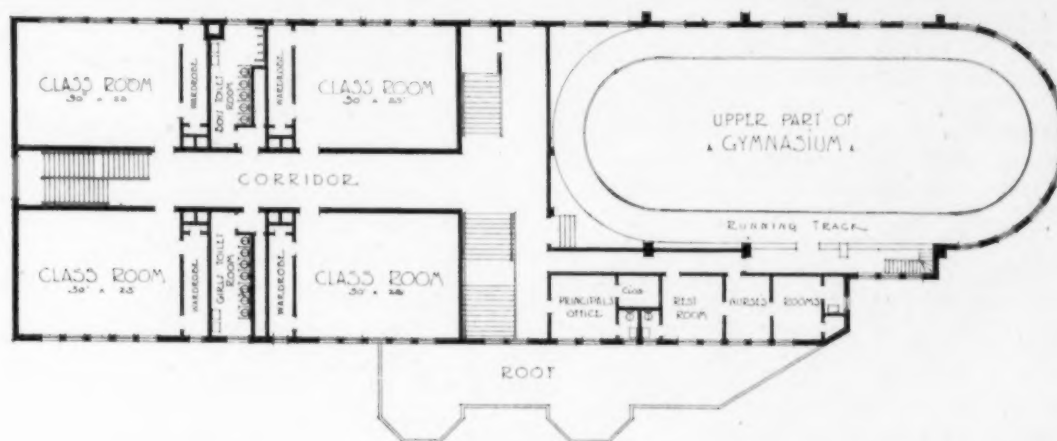
Hoping that you will not feel that we are taking undue liberties in asking for this information, we beg to remain

Very truly yours,
J. E. Poship,
Manager.

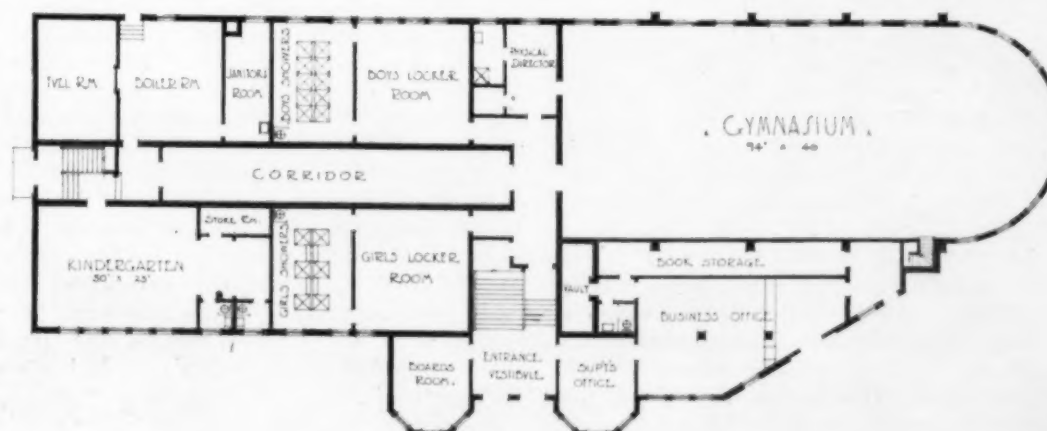
Undoubtedly the agency that so generously offers its services to a board of education on the chance that "they may be looking for a superintendent" maintains a beneficent interest in the superintendent in the employ of that board of education. It would willingly perform for him the same service as for the "several good men" listed with it.

Most superintendents are human and try to be fair. I suggest, therefore, that the agency first write the superintendent asking what his plans are with respect to his position. If he fails to respond within a reasonable length of time, then such a letter as appears above would be in order. If he is leaving he will willingly supply the information desired. If he stays he need only indicate his intention and

(Concluded on Page 133)



FIRST AND SECOND FLOOR PLANS OF THE HILL STREET SCHOOL, GLOBE, ARIZ. Trost & Trost, Architects, El Paso, Texas.



GROUND FLOOR PLAN, HILL STREET SCHOOL, GLOBE, ARIZ.



THE AMERICAN School Board Journal

WM. GEO. BRUCE }
WM. C. BRUCE } Editors

EDITORIAL

DIVIDING LINE BETWEEN HOME AND SCHOOL.

The relations between home and school have always been a delicate and in some respects a vexatious subject. No one can deny that, notwithstanding the avowed opposition on the part of the American people to anything that smacks of paternalism, our schools are manifesting an increasing tendency towards paternalism.

Nor is this tendency fostered alone by the schools. The parents have from time to time foisted greater responsibilities upon the schools. The latter have, in the interest of the child, accepted every added burden readily and cheerfully.

Gradually the indulgent parent has relied upon the school for disciplinary service. The shiftless parent has left the physical deficiencies of the child to the care of the teacher. The schools have come forward with medical examinations, they have told parents of defective eyes, ears and nasal and throat organs, and have called attention to undernourishment, to insufficient clothing, truancy, etc., etc.

The momentum gained here has prompted educators to hold that the things children may do or fail to do while at home may have a bearing on what they do or ought to do at school. But, let the indulgent, and even the shiftless parent get the notion that the teacher is getting too "nosey," namely, carrying out a policy made necessary by parental indulgence and shiftlessness, and trouble ensues.

At Taunton, Mass., Superintendent Persons inaugurated a survey in conjunction with the study of hygiene, designed to reveal some of the pupil habits of home life. It brought out the fact that a surprisingly large number of children ate little or no breakfast, others drank altogether too much coffee, some did not retire until way after ten o'clock. This information enabled the teachers to account for certain weaknesses and to suggest correctives.

But, lo and behold! A storm of parental indignation followed. The superintendent and the school board were charged with an act that was highly paternalistic and an infringement upon the personal liberty of parents.

If the home carried out its end of the bargain as efficiently as does the school there would be no need for the exercise of paternalism on the part of the latter. The paternalism now exercised by the school is the creation of the parents themselves. It has grown out of a condition.

The educator must, after all, draw a line between parental authority and school authority. The courts have held that where the conduct of the pupil affects the morals and manners of the schools, the teacher's authority goes beyond the school grounds. But, it ends at the home premises of the pupil.

Nor, should the school authorities invite a greater share of the parental burden than they

are now carrying. Children should be in a teachable condition when they arrive at the school. Affirmative instructions based on quiet investigation rather than upon inquisitorial surveys, no matter how laudable the latter may be, will serve more satisfactorily in the relations between the school and the home.

SCHOOL BOARDS AND SCHOOL DISCIPLINE.

During the recent world war the schools of this country suffered considerably through a weakening of disciplinary regulation and direction. The dislocation of an established order of things, as experienced particularly in the industrial world, penetrated in a peculiar manner the field of school administration. Both teachers and pupils here and there became rebellious, and defied the school authorities.

With the return to normal conditions the schools of the land returned to the former calm and orderliness. The authorities once more became master of the situation, and a humiliating surrender to the unruly apparently became a thing of the past.

Occasionally, however, startling weaknesses on the part of school boards in exerting their authority and upholding obedience come to the surface.

A school board in Massachusetts, upon an investigation upheld a teacher in a course of action he had taken for the benefit of his pupils. But, because some one objected to the teacher they "dismissed him in the interest of harmony."

The pupils of a Maine village school went on a strike recently because the school board deemed it expedient to fire the principal. The school committee, after a few days' deliberation, acceded to the demands of the pupils.

In a western city the pupils went on a strike because the board had removed a principal. The board informed the pupils in language that was plain and direct that the principal would under no circumstances be reinstated, and that the pupils had better come to school, or engage in some interesting transaction with the truant officer. Twenty-four hours' reflection brought every last pupil back to school. They came voluntarily.

There are times when the school authorities must stand out firmly against the demands of misguided pupils, misinformed parents and misplaced teachers. If the era of increased efficiency now begun in the schools of the nation, is to be maintained, then the recognition of discipline and order becomes imperative. Every link in the school system, from the legislative body and the highest executive down to the last pupil, must obey the laws that make for progress and welfare of those for whom school houses are built and teachers are employed.

TEACHER WELLBEING—THE OTHER SIDE.

Those who have championed adequate compensation for teachers have, in many instances, drawn some woeful pictures of the economic disadvantage under which the American school workers have been laboring. It has been a favorite occupation of the extremists to compare the teacher's salary with the wage exacted by the plumber, the mason and the carpenter.

A publication which rightfully claims the banner circulation among teachers, in announcing its value as an advertising medium, states that 34 per cent of its readers travel, and that "the percentage will be even greater this year because they now have more money to spend than ever before. The teacher's salary has, on the average, increased 61 per cent since 1914."

In quoting this authority as to the economic wellbeing of the teacher we do not imply an argument to the effect that the teachers are too

well paid. In fact we have persistently and consistently held that the higher compensation must stand for the present as a logical basis upon which to command higher standards of efficiency. The march of progress must continue, and in a country builded upon the principle of self-government the educational factors are vital and fundamental. A continuous upward tendency must be fostered.

The authoritative statement that the teachers are well provided for should silence the agitators who have been inclined to hold that the school authorities of the land have been unmindful of the equities involved in properly compensating the schoolroom workers.

ADMINISTRATIVE ATTITUDE ON ARCHITECTURE.

Those who have observed the marvelous development, during the past decade or two, in American school architecture must readily agree that this was not only possible through the vision of the modern architect, but also through the progressive attitude of the school authorities as well.

If the architect has been permitted to advance new ideas as to utility in orientation and grace in design, it is because these ideas received recognition at the hands of those who accept and pay for them. The local aspirant had to be ignored and the accredited schoolhouse architect, no matter whence he came, had to be recognized.

It was this advanced policy on the part of school authorities that developed the great experts and specialists who reared the modern schoolhouse which is a creation that defies in perfection and service those of other countries.

The Western Architect recently delivered itself of the following: "While schools are neither political nor commercial in their purpose, and their conduct and maintenances should be in the hands of the 'best minds' in a community, and kept entirely beyond the influence of per cent cost and political manipulation, it is singular, but approximately true, that with few exceptions both these inimical influences are connected with and therefore control school affairs."

If this sweeping charge were and had been "approximately" true, the school of today would be a mere shelter refuge for children and not an educational plant of a high order. The editor of the architects' journal recites an incident where a school board in the northwest excluded a "foreign architect and recognized a 'local' aspirant in the planning and construction of a school building, with allegedly costly results.

This may all be true. These things do happen, and yet they are exceptional, and not the rule. But, to lift an incident of this character into prominence and thereby attempt to prove a general condition, is hardly permissible. The history of the past and the achievements of today disprove the charge.

We do not excuse the school board that resorts to penurious and short-sighted methods in rearing school buildings, but we are confident that the thousands of well-appointed and dignified structures, found throughout the country, stand as an eloquent refutation to the charge that reprehensible methods are commonly employed.

We cannot emphasize too strongly the fact that modern school architecture, as exemplified in this country, stands out as an unparalleled achievement in the history of architecture. And if we agree to this statement, then we must also concede the fact that only the most acceptable policies on the part of the school authorities could have made this achievement possible.

EDUCATIONAL CONVENTION NEWS-PAPER REPORTS.

There is a wide difference between what is deemed vital in educational conventions and what the newspapers sometimes report of them. The latter approaches the subject from the standpoint of the layman and are inclined to touch only upon the unusual, the frivolous and the worthless. In lifting out certain paragraphs from an address thus ignoring context, sequence and continuity, the paragraphs may readily assume, from an educational point of view, the character of the unusual, frivolous and worthless.

The newspaper reports not only vary in character with the conception and understanding of those who report them but also with the size of the town. In the larger cities important educational gatherings are submerged in the multiplicity of events and usually fail to command the attention they deserve. In some of these cities all conventions are ignored because their deliberations concern a certain class only rather than the general public.

At the recent national Superintendents' convention held in Chicago, the important newspapers of that city recognized the deliberations of that body in fairly liberal reports, or rather in printing pertinent paragraphs from the addresses of the leading speakers. This evidently was done in recognition of the fact that education concerns an entire newspaper reading constituency.

In the medium sized cities the educational conventions usually receive more liberal attention. At Salt Lake City, Utah, in 1920 the newspaper provided splendid and reasonably complete reports. At Des Moines in 1921 the newspaper reports were warped and ridiculously sensational. In both cities the attitude of the press was a generous one.

If a review were made of the country at large, dealing with the newspaper reports made of state and county educational gatherings, it would be found that there is a honest effort on the part of the press to publish all the essential news features. It would also be found that these reports are largely unbalanced as far as their emphasis upon vital phases in educational effort is concerned. Frequently they enlarge upon the trivial and immaterial. Besides the picturesque and dramatic receives attention rather than the meritorious and valuable.

Experience has taught that those in charge of educational conventions must conduct well-planned press bureaus, if reasonably accurate publicity is to be secured. Advance copies of extracts, covering the salient points of their discussions, must be supplied by the speakers. Such press bureaus must stand ready to assume a helpful attitude towards the newspaper man who is anxious that his report be accurate and compact, yet reasonably complete.

While the purely technical and involved problems in education do not interest the average reader it nevertheless remains that the general public should at all times receive a correct viewpoint on the educational tendencies and aspirations of the day. There may be a difference between educational values and popular news values, but there can be no difference of opinion as to what the public should know regarding the progress made by the educational forces that serve the nation.

POLITICAL SCHOOL PUBLICITY.

The political arena as exemplified in the average American city presents many phases of desire and ambition which are commendable, and which make for the civic progress of the community and the nation as a whole. We are perhaps too prone to place an interpretation upon politics and politicians which on the

whole is undeserved. Politics and politicians are basic factors under our form of government, and the American people owe everything we have in the way of liberties and institutions to clean politics and clean politicians.

Thus, when the assertion is made that the schools and politics must be kept widely apart we have in mind the baser tendencies to which political activity may lend itself. That political tendency which unselfishly promotes the welfare of the whole community, the whole state and the whole nation is always laudable.

The evil must be found in political activity which, under the guise of promoting public welfare, seeks individual advantage. And here it must be said that no form of political preferment is more reprehensible than that which selfishly employs the schools as a roadway of travel.

There is the man who seeks school board honors as a stepping stone to higher public distinction. If he serves well no objection can be made. But, if he seeks the honor for the mere publicity he can gain, the chances are that his school administrative services are negligible. Then there is the other man who sees an opportunity to win temporary acclaim in some quarters by denouncing the superintendent of schools, shouting fads and frills, or pursuing a policy of obstruction.

Where sheer publicity is the sole aim it can always be secured. Newspapers will publish the unusual rather than the orderly and regular. The thoughtless in the community will always grasp the things that look plausible and attractive.

In New England cities the mayors have been in the habit of "jumping on" the schools, and superintendents, whenever the public suggests that the mayor ought to be doing something, and the jump looks good. There is always something about the schools or its administrators that can be criticized. Plenty of publicity will follow.

In distinguishing between politics and politics, the public is likely to become confused between motive and objective. A courageous attack looks better in print than a modest defense. The motive—good politics or bad politics—is submerged in attractive and readable publicity.

THE TREND TOWARD FINANCIAL INTERDEPENDENCE OF SCHOOL BOARDS.

Several states have changed from dual control of school finances to independent control by school boards. But we have been unable to find a single instance of the reverse of this action. Two states, New York and Massachusetts, are now seeking legislation to relieve the schools of intolerable conditions due to their domination by other branches of government through control of the school budget.

Texas revised its school law twenty years ago because of disagreement between city councils and school boards with reference to the amount of tax to be levied for the support of schools.

For like reasons, similar changes have occurred in Kentucky and Utah. The legislature of Kentucky is now being asked to make the schools of Louisville independent of City Council, like all other schools of the state. Even Philadelphia, where the present proposal is made, emancipated its School Board after many years of unhappy financial serfdom.

ENGLAND CUTTING SCHOOL EXPENSE.

A committee of distinguished men, economists, bankers, merchants, manufacturers, shipbuilders and railroad chiefs, rendered a report on reductions in national expenditures.

Education comes in for a considerable slash. The budget estimate provides for \$302,930,000,

while the committee reduces the amount to \$206,500,000. It suggests that the saving can be effected by raising the minimum age limit to six years, closing small schools, decreasing ratio of teachers to pupils and revising salaries.

CALM JUDGMENT INVITED.

It cannot be denied that the school authorities throughout the United States are confronted with serious problems of a financial character. The public is clamoring for a reduction in taxation, the school boards are seeking retrenchments, and the professional factors are concerned with the maintenance of school efficiency.

The economic revulsion which the country is now undergoing has struck the schools in a peculiar way. The cost of school housing, maintenance and professional service has leaped into unusual proportions while the sources of support have become seriously strained.

A manufacturing plant may work on a reduced schedule because of a decline in business. It may submit to the process of deflation by cutting the cost of production, and protect itself against ultimate insolvency.

The school plant cannot resort to precautionary safeguards of this character. The school must go on. Its productive ability must be kept upon the highest standards of efficiency. The output must continue to measure up in quantity and quality.

This means, too, that the financial support to run the school plant must continue, whether the sources of that support are strained, or not. And where this situation has arisen in an aggravated form, as we look over the country at large, we note that it has also been followed in instances by heated discussion and ill tempered argument, more particularly in rural districts.

It remains for those in authority to have clearly in mind the function of the schools and the relation they bear to it. The strain in most instances is temporary only. Certain economies can here and there be effected. A scheme to run the schools without money will never be evolved. What is worth having is worth paying for, although the price may seem high for the time being. After all we spend less money for popular education than we do for tomfoolery.

Calm judgment must prevail. The splendid momentum which the schools of the land have obtained must be sustained. The youth of the land, its most vital asset, must be trained to useful citizenship, if decay and disorder are to be averted. The country is too resourceful and circumspect to be deterred from the path of progress through a fleeting economic disturbance. Again, calm judgment must prevail.

ENORMOUS REDUCTIONS IN BUILDING COSTS.

The board of education of New York City recently let the first contract in eight years for a new high school building. The experience here is rather a remarkable one. The estimate for four buildings made some months ago was \$2,508,000 each.

The bids for one school recently opened showed that the lowest for the construction work was \$1,266,621, as against the estimate of \$1,693,000, made some months ago. If the heating and ventilating systems, as well as other equipment will show a proportionate reduction the whole project will cost less than \$2,000,000.

It is now expected that enough of a reduction of cost over the original estimates on the four high schools will be made to permit the construction of a fifth high school costing \$2,000,000.

A Tentative Rating Scale for Teachers of Industrial Subjects

Arthur Frank Payne, College of Education, University of Minnesota

There is one phase of the recent rapid development of the use of scientific methods in the field of Education, that is fundamentally significant and far reaching in its results, and that is the attempt to develop standardized scales, tests and measures for all the elements of Education.

Some of these elements for which scales, tests and measures are now in the process of being formulated are (a) the raw materials, that is, pupils as presented for education, (b) the finished product of the educative processes, (c) the functioning in the individual and in society of the various subjects of the curriculum, (d) the efficiency of the various methods of presenting course and subject content, (e) the rate of learning, (f) the school building and its entire physical equipment, (g) teaching ability, etc.

Out of the vast amount of experimentation now going on in this field, there will undoubtedly be developed standards and scales that will be of inestimable value in all phases of education. It is true that many of our present standards, scales, tests and measures are crude, inaccurate and based on insufficient data. It is also true that we are not always sure just exactly what it is we are attempting to measure, but whatever may be the case, they are certainly better than anything we have had before and, most important of all, their general use will bring about improvements that will make them more nearly approximate the ideal—100 per cent efficiency.

In the field of industrial education, very little has been done in the application or development of scientific methods to the elements of industrial education. One of the most crying needs in this field, is some method whereby the harassed and overworked school superintendent can rate the various applicants for teaching positions in industrial education, and choose those that will best fit into the conditions of the vacancies he may have to fill. The school administrator also needs some method whereby he can rate and rank teachers who may be in his system, this rating being used as a basis for promotion, salary increases, etc.

The writer has a strong sense of the weaknesses of the tentative scale for the rating of teachers of industrial subjects as presented below, but has been encouraged to present it as a piece of experimental work that has produced better results in actual practice than the old empirical method of choosing such teachers. It is put forth in the hope that it will develop suggestions and criticisms that will improve it. So far as the writer knows, no similar rating scale has been developed particularly for teachers of industrial subjects and it is hoped that those who make use of it will keep in mind the fact that in the academic field, where considerable work has been done along this line, there is no unanimity of opinion or common agreement as to the elements of a rating scale for academic teachers nor as to its best form, best method of using, or the way in which the results should be used when obtained.

A Tentative Rating Scale for Choosing Teachers of Industrial Subjects.

1. Name of person rated.....Date.....
2. Present position
3. Home address
4. Name of person doing the rating.....
5. Present position
6. Home address

Instructions. Place a cross in the superior, good, medium, poor, failure column, indicating

your judgment concerning the various elements of the rating scale.

I. Preparation for teaching. Superior, good, medium, poor, failure¹

- a. General education
- b. Professional education
- c. Industrial experience
- d. Teaching experience

II. Personal qualities.

- a. Physical appearance
- b. Manner
- c. Character
- d. Leadership in school and community....
- e. Control
- f. Cooperation

III. Success as a teacher.

- a. In an All day trade school.....
- b. In an Evening trade school.....
- c. In a grade manual training shop.....
- d. In a high school manual training shop...
- e. In a junior high school prevocational shop
- f. In part time classes.....
- g. In a factory school or training department
- h. In wood working classes.....
- i. In metal working classes.....
- j. In automobile classes.....
- k. In mechanical drawing classes.....
- l. In architectural drawing classes.....
- m. In related subjects classes.....

¹Five columns are provided so that the supervisor may check his opinion of the teacher as superior, good, medium, poor, or failure.

- n. In electrical shop classes.....
- IV. *Technique of teaching.*
- a. Selection of subject matter.....
 - b. Organization of subject matter.....
 - c. Discipline
 - d. Records and Reports
 - e. Economy of time, energy, material
 - f. Aim, definite accomplished
 - g. Correlations
 - h. Motivation
 - i. Lesson planning
 - j. Standards of Workmanship
- V. *Shop Management.*
- a. Care of tools and equipment.....
 - b. Care of material and supplies.....
 - c. Orderly arrangement of Shop
 - d. Orderly entrance, dismissal
 - e. Exhibits
- VI. *Results of teaching.*
- a. Students
 - b. Projects
 - c. School
 - d. Community
- VII. *Professional advancement.*
- a. Professional courses taken during service
 - b. Professional promotion during service...
 - c. Salary increases during service.....
 - d. Membership in professional organizations
 - e. Attendance on teachers' meetings.....
 - f. Publications
- TOTALS

Will you kindly return this sheet to the undersigned who thanks you for your courtesy and assures you that this material will be kept confidential.

Name Date

Position

Address

Some of the Highest Paid Elementary Teachers (1921-22)

Bertha Y. Hebb, Washington, D. C.

The cities upon the list below, 64 in number offer the highest maximum salaries to their elementary school teachers of any cities in the United States having a population of 10,000 and above, according to a study of salary schedules for the year 1921-22.

Cities.	Maximum.	Minimum.	Years to reach maximum.
California:			
Alameda	\$1700	\$2000	12
Los Angeles	1400	2000	—
Oakland	1500	2040	10
Pasadena	1400	2000	—
San Francisco	1400	2000	8
San Jose	1500	2000	10
Stockton	1620	2340	7
Colorado:			
Denver	1200	2140	—
Connecticut:			
Waterbury	1000	2000	—
Illinois:			
Chicago	1200	3000	9
Indiana:			
E. Chicago	1000	2000	—
Gary	—	2400	8
Iowa:			
Sioux City	1320	2100	5
Massachusetts:			
Boston	1200	2000	—
Brookline	1400	2000	—
Newton	1200	2000	—
Michigan:			
Ann Arbor	1250	2150	7
Detroit	1500	2000	—
Grand Rapids	1200	2000	9
Minnesota:			
Minneapolis	1200	2000	8
Missouri:			
Kansas City	1200	2200	—
Nebraska:			
Omaha	1200	2100	9
Lincoln	1000	2200	—
New Jersey:			
Atlantic City	1200	2000	—

Bayonne	1400	2500	10
Belleville	1000	2000	10
East Orange	1300	2100	8
Englewood	1200	2000	8
Hoboken	1200	2460	7
Millville	825	2050	—
Montclair	1300	2100	—
Passaic	1200	2000	7
Plainfield	1200	2200	10
West Hoboken	1200	2500	—
West New York	1200	2300	11
West Orange	1200	2200	7
Jersey City	1400	2600	13
Paterson	1200	2700	11
Newark	1500	2500	11
New York:			
Buffalo	1200	2000	8
Mt. Vernon	1300	2700	9
New Rochelle	1200	2100	8
New York City	1500	3250	9
White Plains	1000	2200	8
Yonkers	1500	2700	8
Ohio:			
Cincinnati	1200	2200	—
Cleveland Heights	1200	3300	12
East Cleveland	1200	2300	10
Norwood	1100	2000	9
Toledo	1200	2000	8
Oklahoma:			
Ardmore	1200	2280	—
Tulsa	1320	2000	—
Pennsylvania:			
Harrisburg	1100	2500	—
Johnstown	900	2200	—
Norristown	1000	2000	8
Philadelphia	1200	2000	8
Pittsburgh	1200	2000	8
Scranton	1000	2000	8
Texas:			
Port Arthur	675	2000	—
Washington:			
Seattle	1500	2100	—
Spokane	1200	2150	—
Wisconsin:			
Appleton	1000	2200	—
Milwaukee	1200	2400	12
Wyoming:			
Casper	1600	2200	7

What are your plans for teaching Music Appreciation next year?

The closing months of the school year naturally focus your attention on plans for the coming term.

What of Music Appreciation? The spread of the teaching of this subject—fully possible only with the Victrola and matchless Victor Records—has been phenomenal. If you have an established course, you will want new suggestions; if you are planning the installation of a course, you will want assistance.

Avail Yourself of these Practical Helps

What We Hear in Music, by Anne Shaw Faulkner. 421 pages, illustrated. A complete course in Music History and Appreciation. List Price \$1.00 (15c additional by mail).

Music Appreciation for Little Children, in the home, kindergarten and primary schools. 176 pages, illustrated. List Price \$1.00 (15c additional by mail).

Victrola Book of the Opera. 433 pages, illustrated. Gives stories of over 100 operas. List Price \$1.50 (15c additional by mail).

Outlines of a Brief Study of Music Appreciation for High Schools. Free.

Syllabus on the Teaching of Music Appreciation in the Grades. Free.

The first three books are for sale by Dealers in Victor Products; the last two pamphlets—and any further information—will be sent upon application to the

Educational Department

Victor Talking Machine Co.
Camden, New Jersey

Victrola XXV
especially manufactured
for School use

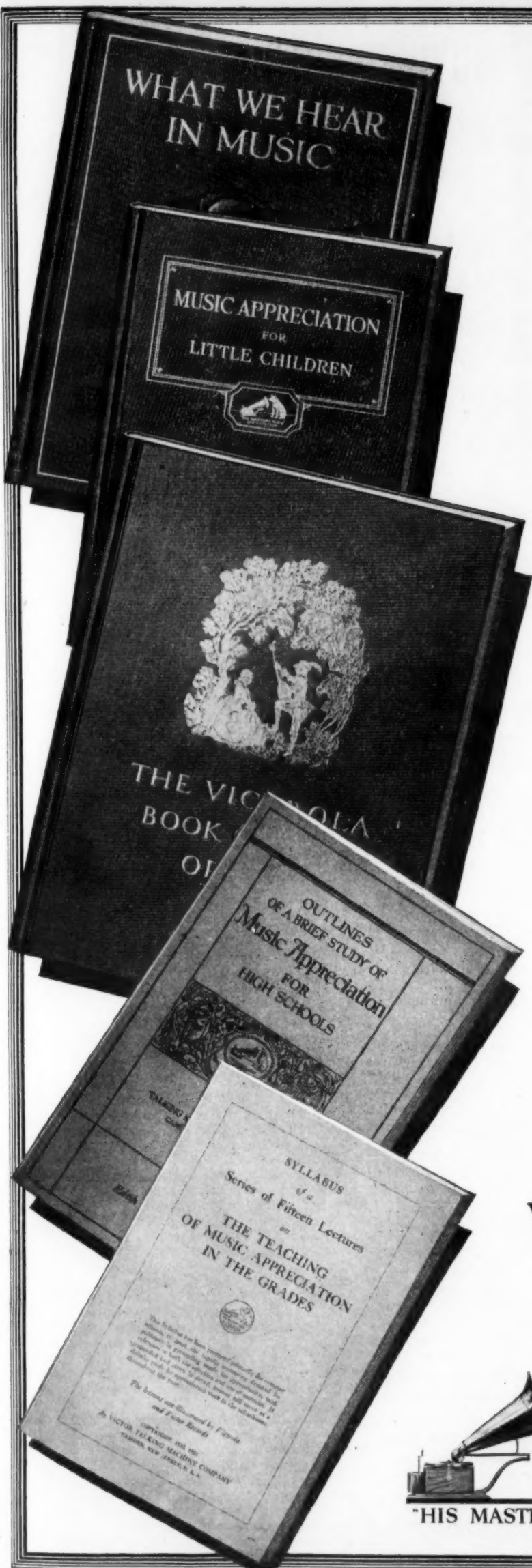
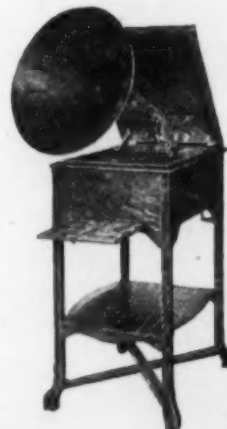
Finished,
golden oak waxed

This is the instrument that is used in thousands of schools. Many years' experience has proved it is the instrument best adapted to all-round school use.

When the Victrola is not in use, the horn can be placed under the instrument safe and secure from danger, and the cabinet can be locked to protect it from dust and promiscuous use by irresponsible people.



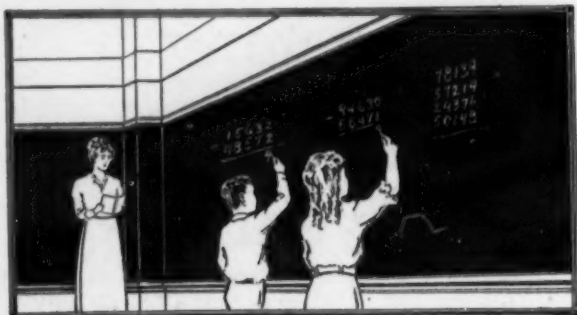
"HIS MASTER'S VOICE"



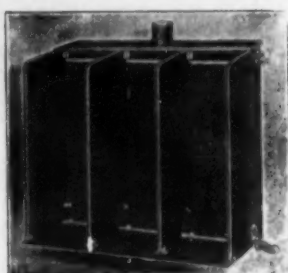
ALBION QUARRY NATURAL SLATE BLACKBOARDS

Are Black and stay Black. The only PERFECT writing surface.

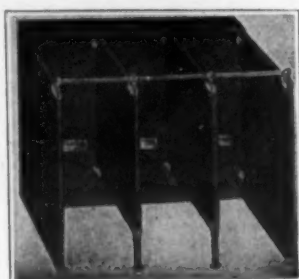
Sample and Booklet sent on request.



The "KEENAN KIND" Sanitary Slate Fixtures provide perfect Sanitation and Ventilation.



B-11 1/2 S—Urinal



B-26—Closet

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"Nothing for Nothing" applies in every realm of effort. But the man who makes an unwise purchase buys something that—like a deficit, is less than nothing; for it requires additional outlay in later years.

NATURAL SLATE BLACKBOARDS

from our quarries represent the acme of economy and educational efficiency. They require no upkeep, while artificial boards must be resurfaced, repaired and replaced regularly. In comparison, the word "economy" is defined in its truest sense. Slate being non-porous does not absorb anything, so cannot disintegrate. It is finished with a beautiful, velvet smooth surface that does not become gray with age or use; that makes writing a pleasure and reading a relief to the eyes of the students and teachers. That is why our Natural Slate Blackboards combine the utmost efficiency with the utmost of economy.

These are but a few of the advantages. Before you spend a dollar for Blackboards, you should read our book "How to Judge, Specify and Install Blackboards." Send for it today.

Penna. Structural Slate Co.

Worth Building

Easton, Penna.



A STATE SCHOOL BUILDING CODE.

The architect's office of the Cleveland, Ohio, Board of Education, through W. R. McCornack, architect, and George M. Hopkinson, engineer, has worked out a digest of state building codes regulating the construction of school buildings. The code is advanced in the hope that it may lead to the establishment of a uniform code for adoption by the several states. The following extract is taken from the code:

What a School-Building Code Should Provide.

For the purpose of comparison with present State codes an outline of what a well-constructed school-building code should include and provide has been suggested below.

The items herein mentioned include only the main headings since it is not the purpose of this study to go into details as to what each item should embrace. The heading is indicative of what should be provided by law to insure proper accommodations, housing, health, and safety.

Site	Laboratories
Playgrounds	Toilet rooms
Kinds of construction	Wash basins and sinks
Height of buildings	Locker rooms
Floor and roof loads	Shower rooms
Ceiling heights	Special rooms
Light courts	Use of basement
Exposures	Auditorium
Fire stops	Assembly halls
Floor space per pupil	Auditorium stage
Air space for pupils	Auditorium scenery
Size of rooms	Stairways
Location of rooms	Stair inclosures
Basement rooms	Corridors
Boiler room	Passageways
Restrooms	Gradients
Cloakrooms	Scuttles
Manual-training rooms	Fire escapes

Egress and ingress
Exit doors
Fire doors
Location and size of doors
Hardware
Maintenance
Artificial lighting
Natural lighting
Materials for floors
Blackboards
Seating
Window shades
Finish of walls and ceilings

Strength of materials, allowable stresses and other structural information should not be included in the school laws as this data should be covered in the structural requirements of the General State Building Code applying to all kinds of buildings. All other items mentioned above should be covered in detail as a part of the School Construction Code, because in each case the requirements are especially applicable and essential to proper school building construction.

State Classification Based on Amount and Type of Legislation.

The following classification is self-explanatory. This simple classification permits a survey at a glance of the present status of school-construction laws throughout the United States. Comparisons can easily be made from succeeding tables.

Class I. States Having the Greatest Number and Most Stringent Laws.

Ohio

Class II. States Having School-Building Laws Covering the Majority of Essential Items.

Illinois
Indiana
Maryland
Massachusetts
Minnesota
New Jersey
New York
Pennsylvania
Vermont
West Virginia
Wisconsin

Water and damp proofing
Fire alarms
Fire extinguishers
Hose reels
Safety appliances
Manual-training equipment
Elevators
Motion-picture booths
Electrical work
Heating and ventilating
Plumbing
Drinking fountains
Water closets
Urinals

Class III. States Having a Few School-Building Laws

Connecticut
Florida
Idaho
Kansas
Kentucky
Maine
Montana
New Hampshire
North Dakota
Oklahoma
South Dakota
Tennessee
Texas
Virginia

Class IV. States Having No School-Building Laws

Alabama
Arizona
Arkansas
California
Colorado
Delaware
Georgia
Iowa
Louisiana
Michigan
Mississippi
Missouri
Nebraska
Nevada
New Mexico
North Carolina
Oregon
Rhode Island
South Carolina
Utah
Washington
Wyoming

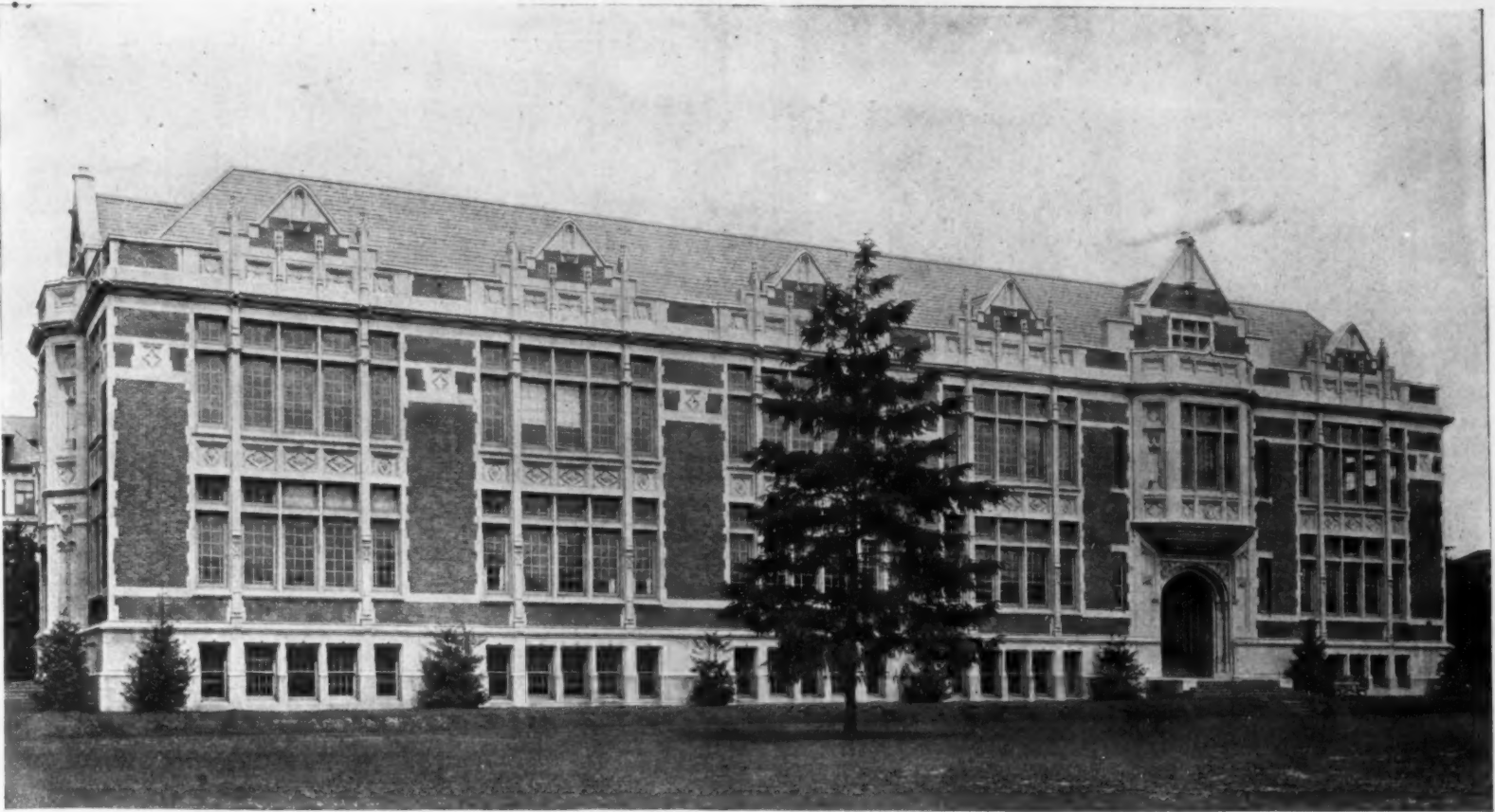
Those states included under Classes II and III in which the State laws provide that proper rules and regulations shall be issued by the State superintendent of education or other designated officials are so included since these regulations have the same effect as definite laws. States in which powers are given to an official or board but no regulations issued are included in Class IV.

Authority Under Which the School-Building Regulations Are Prescribed.

Many States have no school-building code, but rely upon school-building laws and regulations which have originated in a variety of sources. These regulations, in many cases, are left to the administration of some school official.

It should not be expected that one person (especially one that has not specialized in school-building design) can formulate rules for the planning and construction of a type of building which requires such a knowledge of building operations and details. In some cases, the law designates a certain official to prescribe rules for school-building construction and then fails to appropriate the necessary funds for see-

(Continued on Page 74)



Pinkish gray matt Terra Cotta

HOME ECONOMICS BUILDING
UNIVERSITY OF WASHINGTON
Seattle, Wash.

BEBB & GOULD, Architects

CHARM *and* INDIVIDUALITY —at Moderate Cost

AN interesting example of Collegiate Gothic architecture is the Home Economics Building of the University of Washington. Note especially the charm and fine individuality afforded by the Terra Cotta trim and detail.

Monotony is avoided and interest gained by this use of Terra Cotta. In no other facing material can such effective design be expressed at such moderate cost. For Terra Cotta is pressed from moulds and each mould can be used many times to reproduce the same units.

It is within the means of every School Board. Moderate in initial cost, Terra Cotta is almost negligible in cost of maintenance. It is fire-resistant and weatherproof. No matter what the climatic changes, Terra Cotta never changes in texture or color.

If you are considering a new school building for your community write and tell us about it. We can send you information which may save you time and money when you decide to build. Address **National Terra Cotta Society**, 19 West 44th St., New York, N. Y.

TERRA COTTA

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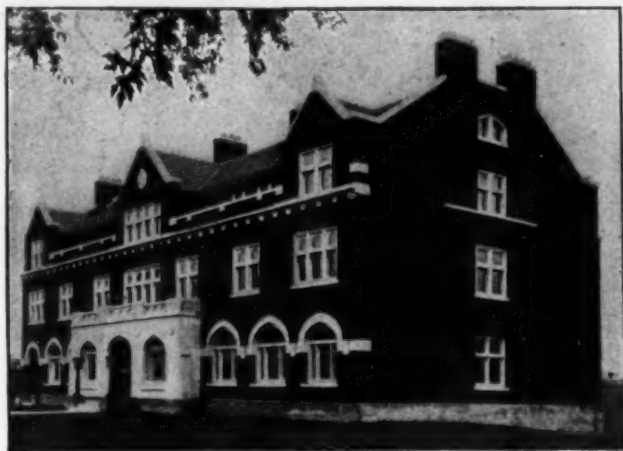
STAIRS IN SCHOOLS



*Consolidated School, Plymouth Township,
Montgomery Co., Pa.*

The increasing use of slate for stair treads in schools is evidence of the durability, fire resistance and velvet-like grip afforded by this product of nature.

Pennsylvania Slate
THE STRUCTURAL SLATE COMPANY
PEN ARGYL, PA.



*Conservatory of Music, Northfield, Minn.
Sound-proofed with Cabot's Quilt.
Patton, Holmes & Flinn, Architects, Chicago.*

Sound Proof Music Rooms

All school-rooms need sound-proof floors and partitions, but music rooms most of all. The above building was sound-proofed with

CABOT'S QUILT

and the directors report the usual "perfect results."

Sound-proof, Decay-proof, Vermin-proof and Fire-resistant—the only material that meets all requirements.

Samples and full details on request.

Samuel Cabot, Inc., Mfg. Chemists, Boston, Mass.
342 Madison Ave., N. Y., 24 W. Kinzie St., Chicago.

(Continued from Page 72)

ing that the provisions of the law are complied with.

State	Authority under Whom the School Building Regulations Are Prescribed
California	County Supt. to approve plans
Connecticut	By State Law
Florida	By State Law
Idaho	Regulations by the State Board of Education
Illinois	By State Superintendent of Instruction
Indiana	By the State Board of Health
Kansas	Suggested Standards only by State Dept. of Education
Kentucky	Rules of State Dept. of Education
Louisiana	State Dept. of Education to approve plans
Maine	State Supt. of Schools and Dept. of Health
Maryland	State Supt. of Schools
Massachusetts	Regulations of Dept. of Public Safety
Michigan	Plans to be approved by Supt. of Public Instruction
Minnesota	State Supt. of Education under Authority of State Laws
Montana	By State Law
New Hampshire	Regulations of State Board of Education and State Board of Health
New Jersey	State Board of Education
New York	By State Law
North Dakota	By State Law
Oklahoma	By State School Law
Oregon	County Supt. to approve plans
Pennsylvania	State Board of Education and Rules and Regulations
South Dakota	Regulations of State Board of Health
Tennessee	By State Law
Texas	By State Law
Utah	State Supt. of Schools to approve plans
Vermont	By State Board of Health
Virginia	By State Law
Washington	County Supt. and Board of Supervisors to approve plans

West Virginia ... Rules by State Board of Education and Public Health Council

Wisconsin ... State Building Code of the Industrial Commission

A glance over the foregoing shows the various methods the States have adopted for formulating building regulations and also how few States have actually incorporated the regulations in the State Building Code to which they really belong.

WHO SHALL CONTROL SCHOOL FUNDS?

This question is asked by the Public Education Association of Pennsylvania. In a brief folder issued, the association provides the following information:

Every school board in the State of Pennsylvania has complete independence in determining the amount of the school levy and in the expenditure of school funds, subject only to statute limitation as to the minimum and maximum of the school tax rate and the general purposes for which school funds may be used. No mayor, city council, board of estimate, or other non-school agency has any power to veto, reduce, or otherwise modify the school budget and tax levy determined upon by the school board.

A proposal has been made by certain officials of the city of Philadelphia that the law be changed so as to give the City Council some authority over the levy and expenditure of school funds. In view of the importance of this matter, the Public Education and Child Labor Association has made an investigation of the various practices in vogue in different parts of the country in the levy and expenditure of school moneys, and the experience of the several states with different plans of levy and control.

States in which School Board Control is Absolute.

In the following 27 states the school boards' control of local school levies and expenditures is absolute, except that budgets of some districts must be approved by vote of the people of the district before the levy can be made: Arizona, Florida, Illinois, Indiana, Iowa, Kentucky (except Louisville), Nevada, North Carolina, North Dakota, Oklahoma, Oregon, South Da-

kota, Louisiana (except New Orleans), Utah, Texas, Virginia, Washington, West Virginia, Colorado, Missouri, Nebraska, Arkansas, Montana, Idaho, Pennsylvania, Minnesota (except St. Paul and Minneapolis), Wyoming.

States in Which Some Boards Are Independent.

In the following states, some school boards are financially independent and others are not: Connecticut, Georgia, Kansas, Massachusetts, South Carolina, Vermont, Wisconsin (in 48 cities the budget may be, and generally is, cut by council), Michigan, New Hampshire, New Jersey, New York, Tennessee, Maine.

In California, county boards of supervisors fix the school tax rate. There appears to be some ground for belief that the new law insures the granting of the school board's requisition.

In Maine, the city charters require the school budgets to be passed upon by city governments, which make the levy.

In Rhode Island towns, the school appropriations are made by vote of the people in town meeting; and in the cities, by the city council. But the courts have ruled that school expenditures may exceed the budget allowance and be charged to the district. This makes the school boards practically independent.

Safeguards Against Extravagance or Misuse of Power.

In nearly all states the statutes prescribe a maximum beyond which the school levy may not go. In some states a minimum levy, also, is prescribed. It is interesting to note that most state legislatures have emphasized the maximum beyond which the levy may not go, while a few place the stress upon the minimum levy.

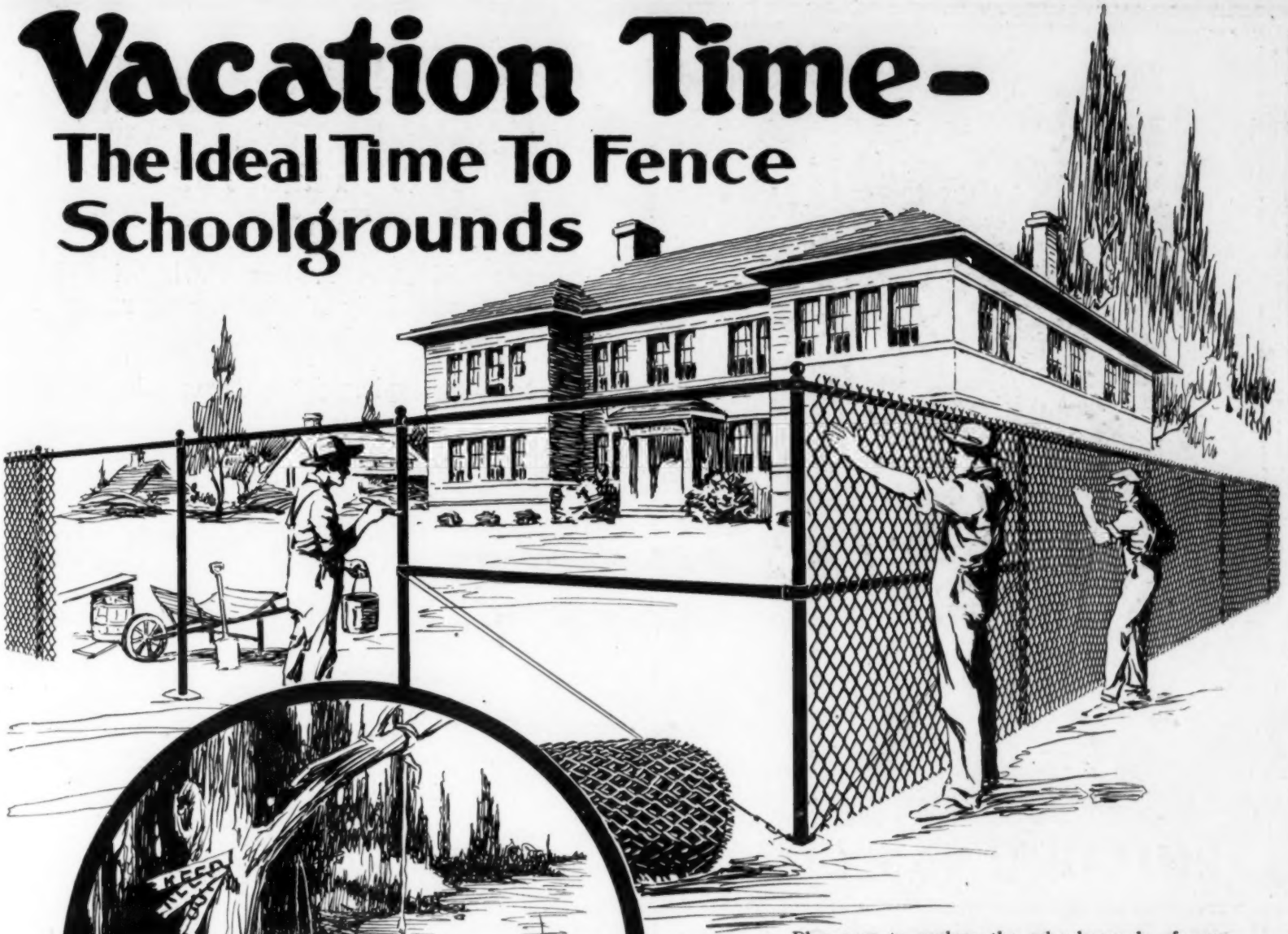
In Idaho, the budget fixed by the school board must be levied, if it does not exceed 15 mills.

In Arkansas, the school budget must be approved by vote of the people before the levy can be made, and it cannot exceed the constitutional limit of 12 mills, on a valuation estimated to average about 20 per cent of the actual value. Thus the schools of Arkansas will be hampered by inadequate support until the constitution can be changed.

(Concluded on Page 76)

Vacation Time-

The Ideal Time To Fence Schoolgrounds



Plan now to enclose the schoolgrounds of your city with Cyclone Fence during the coming vacation season.

The absence of children enables workmen to erect fence with less difficulty and with greater speed, efficiency and economy.

Moreover, the earlier the work is completed, the more Cyclone Fence will protect buildings, equipment and grounds against vandals and rowdies during the months schools are closed.

Next fall, when schools are opened, the schoolgrounds of your city will be safety areas for children. Children will be kept within controllable bounds. School officials will find it easier to enforce discipline and maintain order and system among pupils.

Without obligation, we will gladly submit estimate on enclosing your schools with Cyclone Fence. Our engineering and construction departments will cooperate with you toward getting fence erected at the earliest possible moment. Phone, Wire or Write, District Offices nearest you today.

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No Better School Closet is Made Than "Haas" Plate 700

Sold in complete combination or less bowl, being in respect to this feature splendidly adapted for the replacement of worn out or obsolete equipment.

Made in series including syphon jet and concealed tank types.

Works easily and surely.

Delivers a powerful flush.

Quiet in operation.

Wastes no water—the valve closes tight and stays tight.

Easy of access for repairs when needed.

Get our literature for full details.

Thousands in actual service is the best evidence of its merit.

PHILIP HAAS CO.

DAYTON, OHIO

(Concluded from Page 74)

In Missouri, local boards may levy a tax up to 4 mills, which may be raised by vote of the people to 10 mills in cities and towns, and to 6½ mills in rural districts.

In Illinois, the people may vote a levy 50 per cent higher than the legal limit permitted to be levied by school boards.

Arizona emphasizes the lower limit by requiring all one-teacher schools to levy at least \$1500 and all two-teacher schools at least \$3000.

Pennsylvania, under the School Code of 1911, restricted the levy to a certain number of mills, varying according to the class of the district. The legislature of 1921 placed the emphasis upon the minimum levy by requiring school boards to levy enough to meet the requirements of the state teachers' salary schedule, and permitting them to levy an additional millage for other expense.

School District a Separate Corporation

In some states, as Washington, South Dakota, and Oklahoma, the school district is a separate corporation and its financial independence is secure, even to the extent of issuing bonds; though usually the bond proposal must be ratified by a vote of the people of the district.

This is in sharp contrast to the practice of other states, where school budgets are subject to review and modification by the mayor as in Massachusetts, by the city council as in New Hampshire, Virginia, Vermont, and Wisconsin, by the board of estimate and apportionment as in New York, or by state auditors as in New Mexico.

A Financial Summary.

Supt. C. L. Miller of Latrobe, Pa., has recently prepared a financial summary in which he shows how the operation of the Pennsylvania salary bill will affect the several school districts of the state. The list of cities and their financial needs are as follows:

(See above Table.)

The Philadelphia School Building Program.

Under the new leadership, which has come to the school system of Philadelphia, a com-

Cities	Assessed Valuation	Rel. Value	21-22 Mills	20-21 Mills	Enroll Grades	Enroll High	Salary Prin.	Salary Supt.	*Raise Required?
Jeanette	\$ 5,621,680	¾	18	13	1888	314	2400	3500	no
Homestead	12,496,140	65%	20	20	2597	550	2750	4500	no
Du Bois	3,200,000	30%	40	37½	2300	497	2375	4000	yes
Dormont	7,616,160	½	13	15	1100	243	—	4000	no
Ambridge	6,720,000	40%	25	25	2490	310	2400	3500	yes
Donora	6,175,940	60%	25	16	2645	340	2700	3500	no
New Kensington	6,225,000	60%	22	22	1575	720	2900	3500	possibly
Vandergrift ...	5,000,000	—	20.5	25	1733	567	2250	3600	½ mill
Clearfield	3,190,000	½	20.5	18.5	1100	625	2500	4000	yes
Monessen	10,933,260	50%	22	17	4078	577	2860	4200	no
Rochester	2,500,000	40	—	23	1000	425	2200	3500	yes
Scottdale	3,420,000	75%	20	20	892	321	2475	3000	no
Uniontown	8,014,210	40%	25	25	2603	844	3300	3500	yes
Braddock	14,000,000	67	14	15	2672	439	2700	4000	no
Greensburg ...	11,709,210	—	18	18	2312	776	2835	4200	yes
Corapolis	6,130,000	50%	17	17	1339	272	2700	3600	yes
Windber	1,771,138	40%	25	25	2150	350	2400	3500	no
Munhall	1,132,000	75%	11	12	984	254	3000	3500	no
Latrobe	5,313,180	40%	20	20	1506	625	3000	3600	no

*(Last Column) "Will the operation of the salary bill require an increase for next year?"

prehensive study of immediate and future needs has been made.

A building program, involving an expenditure of \$35,000,000, has been presented by Superintendent Broome to the board of education and has met with unanimous approval. The program was entered upon during the month of March, when ground was broken for the first of a series of new school buildings.

This will be a junior high school, planned to include all the necessary features of a modern school of that character. There will be eighteen junior high schools in the immediate program which is to be realized within the next three or four years.

This will be followed by a future program which contemplates the housing needs for a period of ten years and will probably include as much as is now provided for the first period. As a preliminary, bonds aggregating the sum of \$8,000,000 have been issued.

A program of educational organization is also under way, and with the assistance of the school survey, recently reported by Dr. Thomas E. Finegan, state superintendent, it is expected that when the budget is prepared next Decem-

ber that it will provide for both the building and educational policies for the ten year period.

A STUDY OF SCHOOL COSTS IN TEN LARGE CITIES.

—Dr. W. W. Theisen, Director of Reference and Research in the Cleveland public schools, in a recent report on costs of operating schools in ten large cities last year, has declared there is no uniform basis upon which to figure school expenditures or to compare the per capita school costs, one city with another. Not only does the type of instruction vary but the school service is different. Some cities furnish textbooks, others do not. Some pay the costs of health service. Others do not. Some include in annual budgets the interest upon capital charges for buildings, while in other cities these are charged upon the municipality.

Cleveland, Philadelphia and Seattle pay for health service out of school funds. In Buffalo, Chicago, Detroit, and New York school health service is paid for by the board of health. In Cleveland last year health service in the schools cost \$135,800, or \$1.24 per pupil.

(Concluded on Page 78)



Comparative condition of Softwood and Maple floors at the end of eighteen years' service

A Contrast in Cleanliness— and Comfort



Why MAPLE outwears STONE

Every shoe in the thousands that strike a stone sill, grinds off its toll of fine particles in an unchanging friction. But Maple builds up its own resistance to wear, because each passing foot increases the polish on this hard-fibred, tight-grained wood, making it smoother and smoother. That is why Maple surpasses all other woods and all other materials for flooring.

...

MFMA The letters **MFMA** on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing rules which economically conserve every particle of this remarkable wood. This trademark is for your protection. Look for it on the flooring you use.

YOU see here an actual photograph which shows you the two extremes in flooring. On one hand is a floor that is impossible to sweep—worn out and calling for expensive replacement—full of splinters which attack the soles of the children's shoes.

On the other hand is—**MAPLE**. This remarkable flooring has been subject to the same wear, and it is still giving service—as good, for all purposes, as the day it was laid. This picture was chosen for contrast. But it demonstrates the difference which exists to a degree between Maple and all other woods.

Floor with Maple, and you get the greatest cleanliness and comfort at truly the lowest cost. For this hard-fibred, tight-grained wood simply polishes with wear. It gives the surest anchorage for desks, and a warm, clean footing for your children.

In class rooms, assembly halls, hallways and gymnasiums, Maple is the flooring most widely used. For these purposes there is no finer wood than the climate-hardened, slow-growth Maple of Michigan and Wisconsin—made into standardized and guaranteed flooring according to the rigid inspection standards of the Maple Flooring Manufacturers Association.

Kindred woods of Maple are Beech and Birch. Your retail lumber dealer can show you this trio, and your architect will advise you in the choice between these three leading woods for floors.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
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Floor *with* Maple

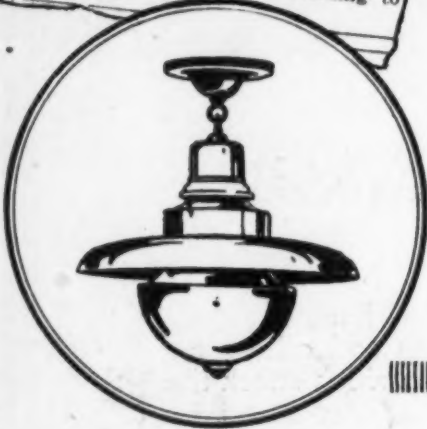
NATION-WIDE DRIVE TO CURE DEFECTIVE VISION IS PLANNED

New York, Feb. 11.—To eliminate the huge national loss of men and money for which defective vision is held responsible, the Eyesight Conservation Council of America announced today that a nation-wide campaign of education would be conducted in schools, industries, and professions, and even on college athletic fields.

The United States department of education, leading universities, industrial leaders, and economists have joined the movement to relieve conditions revealed by the Hoover committee on elimination of waste in industry.

The eye, it was declared, is involved in 11 per cent of all the permanent industrial accidents of the nation, and approximately 25,000,000 persons have defective vision that requires correction.

Faulty lighting in classrooms, offices and industrial plants is largely responsible for this condition, according to the report.



Let's Banish Glare Forever

Glare is probably the greatest cause of defective vision. It tires the eye, exhausts the nervous system and unquestionably retards progress. But thanks to modern science it may be banished forever in the class room. For daylight lighting recent improvements in building construction provide correct illumination. For dark days and night Denzar and the Mazda C lamp duplicate the best daylight conditions. In Denzar the powerful blinding rays of the Mazda C lamp are thoroughly diffused by the Denzar bowl and reflector. Together they distribute the light evenly on both desk and blackboards, besides obliterating all glare and harsh shadows. Many schools and colleges, both public and parochial, have permanently solved their lighting question by installing Denzar. Let us tell you more about the benefits of Denzar and send you a copy of the new Denzar Catalog, D-7. Just write

Beardslee Chandelier Manufacturing Company

219 So. Jefferson St.
CHICAGO

Manufacturers of a complete line of chandeliers for every lighting requirement. Architects and school authorities are invited to place the complete solution of their school lighting up to Beardslee designers and engineers.

DENZAR



(Concluded from Page 76)

Cleveland, Boston and Philadelphia are each required to set aside sums for teachers' pensions. Chicago, Detroit, New York, Indianapolis and Seattle set nothing aside for this purpose. Cleveland set aside \$328,376 last year.

Dr. Theisen points out that the low per pupil cost in Philadelphia is due to a low salary schedule for teachers. Salaries in Philadelphia have been increased since, and there has been an advance of approximately \$3,500,000 in the Philadelphia school budget for the current year.

Another factor which bears upon comparative school costs is a difference of policy in different cities with reference to the upkeep and repair of buildings. Cleveland last year spent \$961,195, or \$8.76 per pupil, for building, repair and upkeep. Detroit spent \$265,493, or \$2.36 per pupil. In Cleveland necessary repairs and alterations are made each year. In some other cities alterations and repairs are "bunched" in certain years.

Data on the cost of instruction and administration alone have been obtained by Dr. Theisen from eight cities. The figures show the cost of service to be lower in Cleveland than in any of the cities with which comparison is made except Philadelphia. The figures are:

	Total cost.	Average daily attendance.	Cost per pupil per year.
Philadelphia	\$13,883,122.07	217,204	\$63.91
Cleveland	9,157,025.30	109,706	83.46
Detroit	9,623,068.29	112,421	85.60
Indianapolis	3,420,688.14	39,569	86.44
Boston	8,679,863.97	99,912	86.87
Seattle	3,884,827.19	41,384	93.87
New York	76,017,315.05	777,190	97.81
Buffalo	5,537,409.17	54,516	101.57

The cost of operating schools, excluding capital outlay and expenditures for the financing of new buildings, is given in the following table:

	Total cost.	Average daily attendance.	Cost per pupil per year.
Philadelphia	\$16,385,583	217,204	\$75.43
Detroit	11,859,967	112,421	101.04
Boston	10,148,844	39,912	101.57

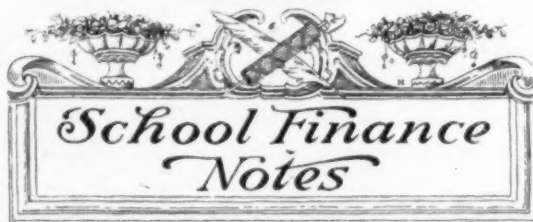
Indianapolis	4,093,799	39,569	103.45
Cleveland	11,882,084	109,706	108.30
New York	84,513,093	777,190	108.74
Pittsburgh	8,339,427	73,961	112.75
Seattle	4,755,877	41,384	114.91
Chicago	39,978,998	345,443	115.73
Buffalo	7,324,795	54,616	134.36

BUILDING AND FINANCE.

—Mount Vernon, N. Y. The board has employed Mr. William H. Allen of New York City to make a survey of the public schools of the city. The survey is to cost \$500, and is to be followed by a more complete survey at a later date which will reach the total cost of \$3,500.

—Kearny, N. J. All school buildings have been equipped with fireproof exits protected with smoke doors.

—The school board at Lansing, Mich., has named the east side junior high school the Henry R. Pattengill Junior High School, and the athletic field the Pattengill Field.



—Laconia, N. H. A new high school will be erected this year at a cost of \$250,000. The building will be three stories high and will accommodate 750 students.

—Cincinnati, O. The board has asked the state fire marshal to make a thorough inspection of every schoolhouse in the city, and to file an official report pointing out any condition which constitutes a fire hazard which endangers the life or safety of children and teachers. The request followed the publication of an article in the Cincinnati Post in which Fire Marshal Dykeman "told of conditions as he saw them." The board objected to the publication of a derogatory report and the failure to make a preliminary report to the school officials so that they might take the proper steps to remedy the conditions.

—Notable progress in the direction of increase in growth of the district and in provisions for new buildings has been made at Easley, S. C., during the past two years. Originally the district comprised only two and one-half square miles of territory, but in a period of two years nearby districts have been consolidated with the Easley District, making a school district eighteen square miles in size. The school district has voted bonds in the amount of \$50,000 for school purposes. Mr. J. V. McElween, formerly state supervisor of rural schools, is superintendent of schools at Easley.

—El Paso, Tex. Contract has been awarded for the erection of a school to contain 27 classrooms. The building will cover a site of eleven acres and will cost \$121,900.

—Decatur, Ill. Following a special referendum election held on March 14th, the proposal to increase the tax rate in the educational fund from two to 2.85 per cent was carried by a majority of 125 votes. The proposal to increase the tax rate for building purposes was defeated by a majority of 213 votes.

—The Fall River, Mass., School Board will require \$1,306,762 this year, which is \$91,762 over last year's budget. The board expects an income, aside from tax revenues, of \$71,470, which includes state aid and tuition fees.

—With elaborate and impressive ceremonies, the cornerstone of the new Central High School at Xenia, O., was dedicated in the presence of a large assembly of students, school patrons and citizens. The building, which will be three stories high, will be built of gray brick. In addition to a number of special rooms and rooms for academic work, there will be a gymnasium, auditorium and study halls for the use of the students.

—The school board of Portland, Oregon, proposes to submit in June a \$3,000,000 bond issue for new schools to a vote of the people.

—The Indianapolis, Ind., school board was obliged in March to negotiate a \$1,000,000 loan in order to replenish the teachers' fund and return \$525,000 to the building fund which had been used for teachers' salaries.

—The school board at Henderson, Ky., is wrestling with a \$17,000 deficit. Unless the city government can find the necessary funds the

(Continued on Page 82)

How do You Figure the Cost of Your Painting Jobs?

THE painting cost chart shown below is the result of general painting statistics secured over a period of ten years. To be absolutely fair in our comparison we have favored the statistics on ordinary paint.

\$2.00	\$1.00	3 Years
Labor	Ordinary Paint	Will Produce a Job that may last 3 years
\$1.50	\$1.50	10 Years
Labor	Hockaday	Will produce a Job that will last for 10 years

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The X-Ray illustration shows in detail its super-construction — the steel reinforcing tie rods and spiral dowels—the heavy wooden brace under the book box, which is fastened to the back post by a steel tie hook and mortised into the pedestal in front—the lifting and tilting desk top—the simplicity of adjustments, and numerous other features—all contributing factors to its lasting qualities.

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OF ADJUSTMENTS

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Enable any desired arrangement of signals for permanent or changeable schedules.

The Largest Exclusive Manufacturers of Electrically Operated Time Systems in the World

(Continued from Page 78)

solution must be found in cutting the salaries of the teachers or closing the schools.

—The claim is made by the Omaha World-Herald that the Omaha school taxes for 1922 amounting to \$3,769,150, represent an increase of 232 per cent for the last five years, and an increase of 2,600 per cent since 1900. "The Omaha school board spends more of the taxpayers' money than the whole city government spends. It spends almost three times as much as the entire county government spends."

—The Joplin, Mo., school board is in a dilemma. It must either close the schools, or face the risk of arrest. In order to keep the schools open to the end of the term the board found on March 1 that it must transfer money from the interest fund to the teachers' fund to pay salaries for more than another month. Such transfer is declared illegal.

—The Kentucky legislature has passed a bill increasing the state school tax from 75 cents to \$1.25 on the \$100. It will affect 295 school districts.

—Munhall, Pa. A high school addition has recently been occupied. The auditorium which is said to be one of the most attractive in the state will accommodate nearly six hundred persons.

—"Each year when the taxes are due, we hear the cry of extravagance in our schools, but such claims are harder to prove than to make," says the Carrollton, Ill., Gazette. "Formerly our best grade teachers received \$35 per month, and at that time the superintendent's salary was \$1000 per year. Where can competent instructors be obtained now at such salaries?"

"In view of the shortage of funds hundreds of school districts in Montana have no recourse other than to close with short terms," is the statement made by Adelaide M. Ayer, state inspector of rural schools, after a several weeks' tour through the southern and central section of the state.

—The Okanogan, Wash., taxpayers' league announces that the average daily attendance in the schools of the state has increased 36.1 per cent; that the school term average has been lengthened from 7.67 months to 8.8 months; and that the average teachers' salary has been

advanced from \$690.18 to \$1160.28. Rivalry in endeavoring to compete in the development of the school plants with neighboring cities was mentioned as one of the causes for high costs of school maintenance.

—The prices of textbooks for the schools of Virginia during the next year will be approximately 64 per cent higher than formerly. The increase is due to the fact that publishers supplying the books under contract to Virginia have done so at the prices prevailing in 1915 when the contract was made. Under the terms of the contract the same could be extended for a period of three years, and the state availed itself of the opportunity, due to which action the books have been sold at a heavy loss to the publishers during the past three years.

The next contracts will be based upon a wholesale price f. o. b. publisher and the maximum retail price will be fixed at twenty per cent on wholesale. While the wholesale price is fixed, it is hoped that some saving may be effected in the cost of distribution.

—Chicago, Ill. The Bureau of Public Efficiency has addressed the members of the school board pleading for a reduction of the present school levy from \$1,500,000 to at least \$1,000,000. The bureau points out that the tax bills are much higher than ever before, and that the largest single item of increase is that for school purposes. School taxes are now nearly two and one-half times what they were four years ago. A great part of the threatened increase for next year is due to higher appropriations for the school building fund, a new tax for teachers' pensions, and a large tax for textbooks.

—Little Rock, Ark. The school board faces a deficit of \$26,000 after the payment of the monthly expenses. Extension of the time limit for the payment of taxes from April to June will affect the financial situation of the schools. Although \$108,000 additional is expected from the voluntary tax this year because of increased assessments, this will not be available until October because of the extension of the time limit.

—A number of cities and towns in the state of Massachusetts have petitioned the legislature for authority to borrow outside the debt limit

for the construction of schools and municipal buildings. The amounts requested vary from \$750,000 for the building of a city hall and other buildings to \$6,896 for school purposes. A total of \$2,897,890 will be spent for new schools, or additions to present school buildings.

—The assistant state fire marshal of Ohio has begun an inspection of the school buildings of Cincinnati with regard to the existence of possible fire hazards. The inspection was begun at the request of the Cincinnati board of education.

—State Supt. T. H. Harris of Louisiana has notified the schools that many of the textbooks will be changed this year and that prices of the new books will be a little higher than formerly. It is provided, however, that in the event of a reduction in the cost of production, or a lower price for the same books in other states, the price will be reduced in Louisiana.

—Indianapolis, Ind. The board of education has accepted the bid of the Merchants National Bank and the Indiana Trust Company for a loan of \$1,000,000 to meet the operating expenses of the schools until the end of June. Of the amount, \$860,000 was turned over to the board immediately and the balance of \$200,000 will be paid April 13th.

—Lorain, O. The board has taken steps to introduce a budget system for the business department of the schools. Under the budget plan, the contemplated expenditures for each branch of the school work will be prepared at the beginning of each school year and the expenditures will be held closely to the budget.

—Burley, Ida. The board has made changes in the direction of economy whereby savings of between \$35,000 and \$40,000 will be made for the next year. It has been decided to discontinue the courses in manual training, domestic science, music and penmanship, and to increase the number of students in high school classes so that two or three teachers may be eliminated. The changes will be in effect for at least a year.

—State School Commissioner S. A. Challman of Minnesota has reported that the past year has been one of great activity in schoolhouse construction. The cost of buildings complete

(Continued on Page 85)

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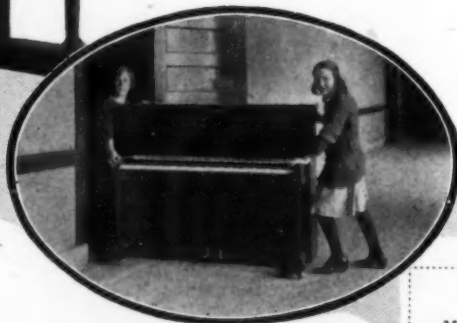
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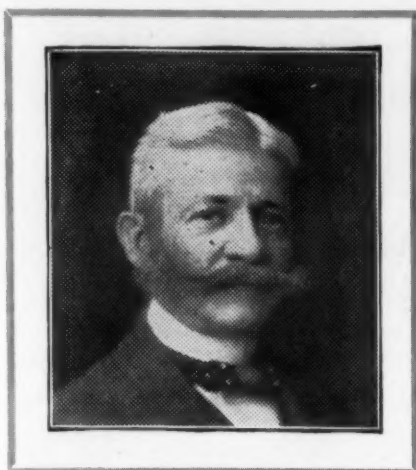
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SPRINGFIELD, MASSACHUSETTS

(Continued from Page 82)

during the year total an expenditure slightly in excess of \$9,000,000. Large high schools have been completed at Austin, Coleraine, Moorhead, Owatonna and Virginia. A total of nineteen cities and towns have completed buildings exceeding \$100,000 but not costing over \$400,000. There are about forty small school buildings under construction in rural districts, involving an expenditure of approximately \$250,000.

Large buildings, including graded and high schools, ranging from those for which contracts have been let to those which are nearing completion are distributed among 29 cities and towns. The amount of contracts totals \$11,000,000. The number of new projects under way and those where some action has been taken toward new buildings include 56 different buildings.

—Hartford, Conn. The board has named a new high school the Thomas Snell Weaver High School in memory of the late Thomas S. Weaver who was for 22 years superintendent of schools in the city. It is planned to erect a bronze memorial tablet to be placed in the lobby of the new school.

—One of the most unique methods of raising a school fund deficit was successfully carried out in the school district of Sugarland, Tex., during the month of March. The plan called for the listing of the names of the children and the adoption of one or two by every single man in the community for the remainder of the school term.

The idea was taken up enthusiastically by the parents of the children, bachelors and widowers, all of whom subscribed as much as possible. The deficit of \$3,000 was fully subscribed in a very short time.

—Battle Creek, Mich. By a vote of approximately four to one, the school district has rejected a proposal to issue \$1,100,000 in bonds for new buildings. The board declares the schools are seven years behind in building needs and require at least four new structures.

—Pittsburgh, Pa. The board has begun the preliminary plans for the erection of \$3,000,000 worth of new buildings, bonds for which have recently been sold.

—Portland, Ore. A survey of the building needs of the schools, together with recommen-

dations for a bond issue of \$3,000,000 were presented to the board recently by the educational committee.

—Mr. Wm. B. Ittner of St. Louis, Mo., has been employed to make a survey of the school plant at Colorado Springs, Colo., and to make recommendations as to what lines the district should follow in improving the schools. It is planned to issue bonds for new buildings to save a period of approximately ten years.

—Seattle, Wash. The proposal of W. A. Porter, president of the voters' information league, to institute a sweeping change in the method of instruction to save expenses of the schools, has been vigorously opposed by Supt. F. B. Cooper. Supt. Cooper made a vigorous attack on the proposition which Mr. Porter declared would save the schools about 135,000 yearly.

—Amesbury, Mass. Two items of school service, continuation schools and school gardens, have been eliminated as a means of economy. A saving of approximately \$3,700 will be effected as a result of these curtailments.

—Cincinnati, O. Steps have been taken by the board to reduce the school expenses. Plans have been made for the closing of eight community centers and a number of summer night classes at the Woodward High School.

—Twin Falls, Ida. Sweeping changes adopted by the board are expected to effect a saving of \$30,000 a year. Under the provisions of the program, the salaries of higher paid teachers will be reduced from ten to seven per cent. Manual training and domestic science departments, including cooking and sewing departments and penmanship in the intermediate school, will be eliminated. The changes reflect the desire of the public and the demand of the people of the district for increased economies in the operation and maintenance of the schools.

—Duluth, Minn. Prof. M. G. Neale, University of Minnesota, has in process of completion, a twenty-year school building program based upon a scientific study of the increase in population by wards. The program is based upon a survey of each of the forty school buildings, the changes which should be made, and the future needs of the city. The program is expected to provide for the condemnation of some buildings, the location of sites for the erec-

tion of new buildings, and for enlarged playgrounds.

—Attleboro, Mass. Charging that the school committee has set itself up as a "sovereign body" and refused to cooperate in an effort to reduce the tax rate, the finance committee of the city council has withdrawn its recommendations for a reduction of ten per cent in the wages of city employees. The only wage reduction which the school committee has approved is that of the janitors.

—Dartmouth, Mass. An appropriation of \$150,000 voted for a new school building at Smith Mills has been declared illegal because the borrowing capacity of the town was exceeded. It is planned to hold another town meeting to vote on building the school and to vote the necessary money.

—The failure of the Texas permanent school fund to accumulate money for investment as fast as was expected has made it impossible for the state board to pay the ten per cent advances on bond purchases acquired in several bond issues. Failure to pay the money has in some instances caused the sellers to ask the withdrawal of the bonds or the privilege of not paying interest where the bonds have not been paid for.

—Prices of certain textbooks used in the Indiana schools have been reduced in compliance with a state law requiring books under state contract to be sold in Indiana at prices as low as in any other state. The price reductions will result in a saving of more than \$36,000 to Indiana school patrons during the four years which the books are under contract.

—Fort Wayne, Ind. The first steps in carrying out the 1922 school building program have been taken with the approval of plans for the improvements to schools and heating systems. The cost of the improvements will reach the estimated amount of \$70,000.

—Missoula, Mont. The board has asked for a five-mill tax levy to carry on the work of the schools during the coming year. Supt. I. B. Fee submitted a retrenchment schedule covering a \$32,000 reduction of the budget.

—Walla Walla, Wash. How school expenses can be reduced is the problem at present facing the school officials. There has never been

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in the history of the schools such a demand as there is at the present time for strict economy and reduction of taxes.

—Cincinnati, O. The employees of the business department of the schools have offered to go as far as any other department in doing their part toward meeting the threatened deficit brought on as a result of the defeat of the school levy. The employees have gone so far as to offer a week's service without pay next September as a money-saving measure and as a means of keeping the school work up to the standard.

—A special school tax of six mills was voted on at the April election held in Butte, Mont., as a means of providing the necessary funds to operate the schools. The schools have faced a large deficit due to the industrial depression and a reduction of tax receipts.

—The Pennsylvania Department of Education owes the schools of the state \$5,000,000 for the half year ending July, 1921, which the treasury is paying off gradually. In all parts of the state school districts are facing a situation which means borrowing money or closing. The school board of Pottsville has been compelled to borrow \$10,000 to pay the teachers. The sum of \$48,000 is due the city of Harrisburg but the school district will avoid borrowing money if the money is paid within the next two months. Eight schools in Lycoming County have closed for lack of funds to operate. The situation is attributed to poor administration and a lack of judgment in determining the appropriations for the several departments of the state.

—Lynden, Wash. To avoid higher taxation and to operate the schools on an economical basis, the school board has outlined a program which it believes will mean the solution of the school problems. The board has made the following recommendations:

1. That the superintendent be the purchasing agent of the board for purchasing all school supplies, and that no teacher order or purchase any supplies without first obtaining a written order from the superintendent. Merchants selling school supplies shall be notified to this effect as the board will deem the district liable only for purchases made in compliance with the rule.

2. That each department, especially manual training and domestic science, agriculture and other science courses, shall be operated under a budget system, and no department shall exceed its budget for the year.

3. That every teacher and instructor shall be held to strict accountability for the economical operation of his or her department or course of study.

4. That manual training, domestic science and special music be discontinued in the grade schools except in the eighth grade until further order of the board and until such a time as the district is able to pay for such courses.

5. That a sufficient number of courses be discontinued that the schools may be operated next year with two or three less teachers.

6. That social activities be restricted so as not to interfere with study and the acquiring of studious habits. Social functions will be limited to Friday and Saturday. The requirements of the high school course should be increased so that students will find ample work for five days and five evenings a week, in order that they shall make full use of their time.

7. The matter of a higher tax levy on non-high school districts tributary to and sending students to the high school will be taken up at the next meeting of the legislature. The board is averse to charging tuition for country boys and girls because it would bar many from high school privileges.

8. The board proposes to close the high school for one to two years in case the voters of the district vote against the bond issue, or until such a time as the indebtedness can be fully paid.

—Supt. C. W. Washburne, Winnetka, Ill., in a recent address, declared that the state of Illinois should contribute one-third of the cost of public school education which totals roughly \$60,000,000. To equalize the burden on taxpayers and to equalize opportunities for the children, it is necessary that the state and county bear approximately two-thirds of the burden of school taxation.

In Illinois in the past, the public schools have been supported almost entirely by local taxation. Each school district taxes itself to support its own schools. But under this plan, some

districts have many children and little property, while other districts have few children and much property.

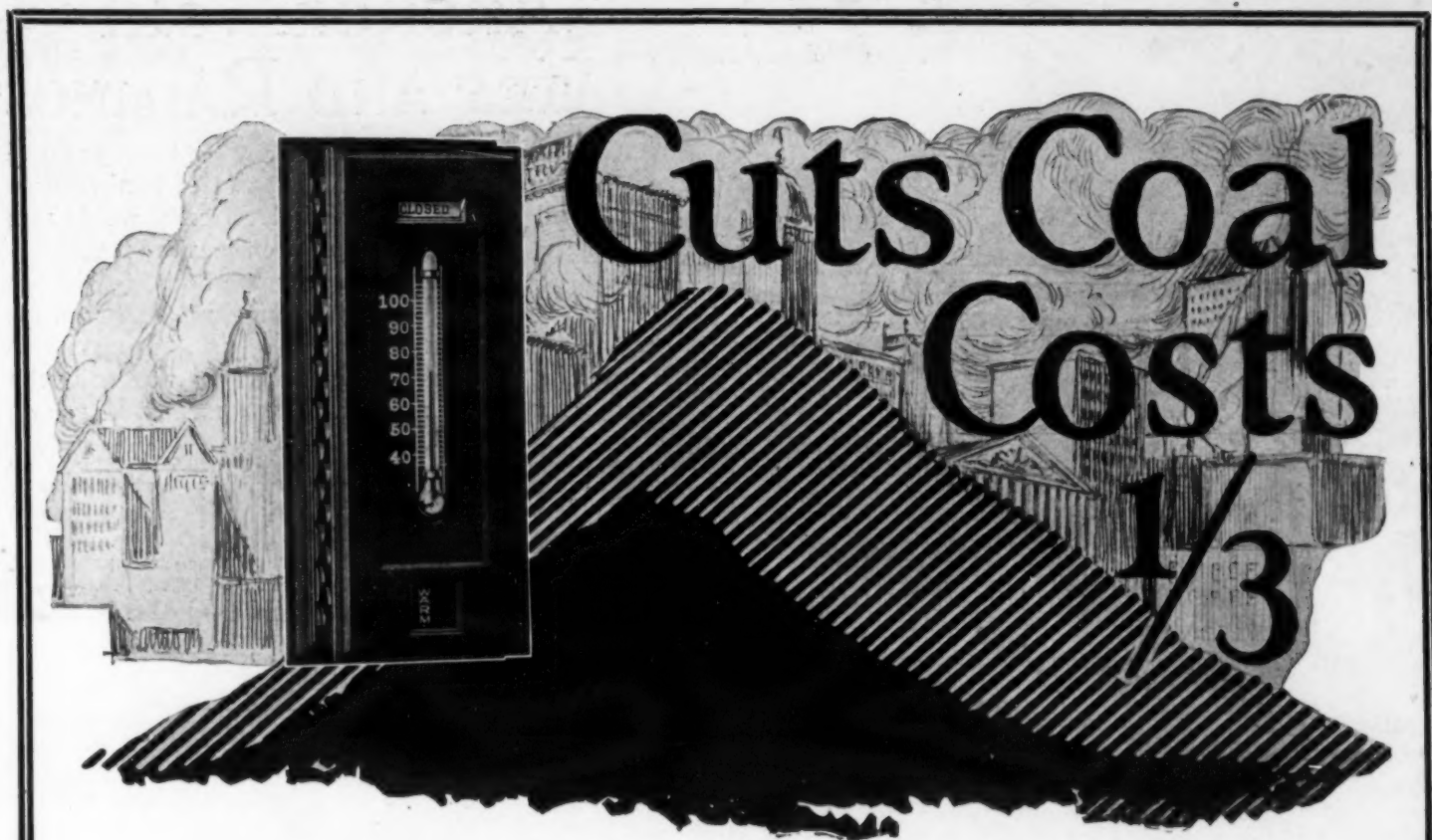
Consequently, some districts which tax themselves only 27 cents on the hundred dollars have plenty of money for the education of the children, while an adjoining district must tax itself \$2.67 and still be lacking sufficient funds to operate the schools. The proper solution, in the opinion of Mr. Washburne, is a larger unit of taxation whereby the wealth of the entire state may be used to give equal educational opportunities to the children of the entire state.

—Lawrence, Mass. The municipal authorities have reduced the school budget by \$30,000 for the current year. The board of education had asked for \$860,000.

—Trenton, N. J. The State Education Department has proposed an increase in the school mileage tax from 2½ to 6 mills, thereby raising \$20,000,000 a year for the schools.

A bill has been introduced by Senator Reeves to carry out the suggestions of the department. Under the new law it is believed a fairer distribution of the burden in the county and state will result.

—Philadelphia, Pa. Secretary William Dick of the board of education has recently defended the board against the charge of extravagance made by the members of the City Council. Mr. Dick showed that while school taxation had increased, the increase had been made mandatory by the Edmunds act passed by the last legislature, and by an amendment of the school code which compels school district to provide training for defective children, half the cost to be paid by the state. Under the law Philadelphia is spending \$346,102 on these special classes, while the state has appropriated only \$10,000. Again, Mr. Dick called attention to the necessary increases in salary which have become necessary to hold teachers. When other cities of equal standing with Philadelphia pay beginning teachers \$1,200 it becomes necessary for the board to keep up the standard set. Mr. Dick declared the board expects criticism because of the increase in taxation but pointed out that such criticism must be based upon the truth, the whole truth, and not half the truth.



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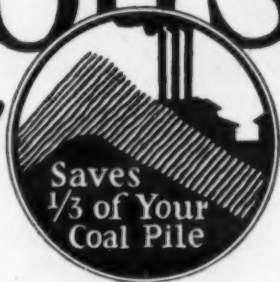
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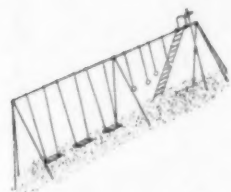
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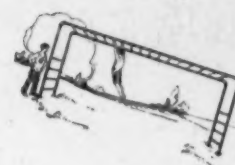
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SCHOOL BOARD—SIZE, TENURE AND DUTIES.

The school board at Kinston, N. C., which is made up of high-class citizens and which has observed some of the recognized principles and policies in school administration was exposed some months ago to unwarranted criticism intended to bring about a change in the plan of organization.

The scheme advanced sought the enlargement of the board membership and the shortening of the tenure, methods which are no longer deemed acceptable. In order to bring to the controversy the best experience on school board organization, Miss Carlotta Mewborn, the secretary to the superintendent, prepared a communication based upon a study of the subject, addressed to the school board, as follows:

Size of the School Board.

"A board of education elected at large, consisting of from five to nine members, whose terms of office equal in length the number of members of the board, serving without pay, has been found acceptable in most American cities." The Classroom Teacher-Strayer and Engelhardt.

"The experience of the past half-century, in city school administration in this country, is clearly and unmistakably that a small board is in every way more effective and a more efficient body than a large one. It, of course, should not be too small, as very small boards tend too much to become one-man affairs, and the gain that comes from having a number of heads consider and discuss a proposition is lost. On the other hand, a few men can always work more economically and more efficiently than can a large body.

The unquestioned experience of our American cities, having large school boards or city coun-

cils, has been that the real thinking and planning and executing is usually done by from half a dozen to half a score of men within the group. A board of five or seven is generally regarded as the most desirable size for all but perhaps the very largest cities, and with from nine to fifteen proposed for such large cities as Chicago and New York.

The small board is far less talkative, and hence handles the public business much more expeditiously; it is less able to shift responsibility for its actions; it cannot so easily divide itself up into small committees, and works more efficiently and intelligently as a committee of the whole; and it cannot and will not apportion out the patronage in the way that a large ward board can and will do.

A large board is unwieldy and incoherent; it seldom transacts the public business quietly and quickly; it tends too frequently to become a public debating society, where small or politically inclined men talk loud and long and 'play to the galleries' and to the press, while personal and party politics, and sometimes lodge and church politics not infrequently determine its actions.

A body small enough in size to meet around a single table and discuss matters in a simple, direct, and businesslike manner, under the guidance of a chairman who knows how to handle public business, and then take action as a whole, is very desirable." Public School Administration—Ellwood P. Cubberley, Professor of Education, Leland Stanford Junior University.

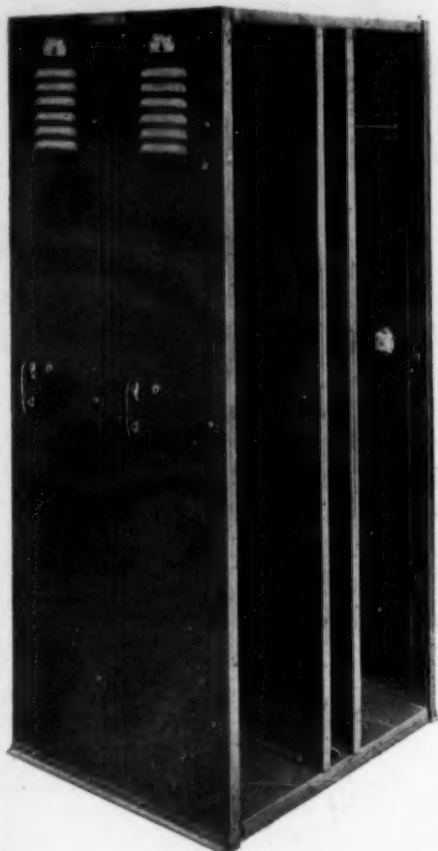
Advantages of Small Boards.

1. Seven board members are enough to give a reasonable variety of opinion, and yet not so many that they may not sit down and reason together. 2. Seven men may be formed into three committees of two men each, with the chairman of the board ex officio a member of each. Committees of two or three are large enough to avoid serious errors upon matters of importance, and yet not so large that they cannot be gathered together quickly. They are not so large as to permit the shifting of responsibility from one member to another, till finally no one is held responsible. 3. Small boards are far more likely than large boards to consider candidly and thoroughly the reports of com-

mittees. 4. It is possible for the school superintendent to know personally every member of a small board, and yet to transact his routine business. 5. In a small board, every member considers himself, and is considered by the people of his community, responsible for the measures adopted by the board. 6. The members of a small board soon become sufficiently interested to learn at least the elementary principles of school legislation and administration. 7. Small boards are in a position to deal quietly and carefully with all delicate questions of personality. At critical times they can avoid undue publicity, scandals and mob influence. 8. Small boards attract a superior quality of men. The average of competency and of unselfish interest is nearly always higher in a small board than in a large one.

Disadvantages of Large Boards.

1. At ordinary routine meetings, it is difficult to get a full attendance. Consequently, there are often 'snap' votes. 2. The large board is an open invitation to the political superintendent or to the educational autocrat. 3. The large board is quickly responsive to popular movements. It is timid. A crowd is always weak in pursuit of a plan. It is also vacillating. A crowd can never represent a high average of culture. Consequently, cities with large boards of education are seldom educationally progressive. 4. In large boards, only the orators get a hearing. The man who can reason well in conversation but who has no gift and perhaps no aspiration to 'stir men's hearts' is not heard except perhaps in a protesting vote. In consequence, large boards represent by their vote the average of the common people's opinion, and not the reasoned product of the best thinkers. This is democratic enough, but true Americanism is a desire to live up to the best. 5. Responsibility cannot be located. A large board almost inevitably divides into the adherents of the two great national parties. Then, because there is no reason inherent in school affairs for any such division, the two groups break into factions. Combinations of these factions put through all school measures. These combinations are constantly changing. There are usually three to six men who are the real leaders. The rest come merely to vote or to



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hear the proceedings. 6. The work of the various committees of the board is seldom satisfactory. The problem of a proper subdivision of a large board is a very serious one." Our Schools: Their Administration and Supervision—William Esterbrook Chancellor, Hoge Professor of Political Science, University of Wooster, Wooster, Ohio.

In fifty cities in the United States having over 100,000 inhabitants the school boards in 1895 averaged seventeen members. Twenty years later, in 1915, these cities had reduced the size of their boards to an average of eight members. In 1912 out of 1371 cities studied it was found that 784 had boards ranging from three to six members; 458 had from seven to eleven members, 306 of the 458 had seven members; 29 had from twelve to twenty-four members. Only two out of the 1371 had fifteen members on their boards.

The Lenoir County Board of Education is composed of three members. Lenoir County has five commissioners. Kinston has five members of the city council.

Length of Term of Board Members.

On the question of the length of term of the school board Dr. Cubberley advocates a long term. He says: "Short terms of office and rapidly changing membership do not produce conditions conducive to good school administration, and do not attract the best men to the service. In cities where all or even a majority of the school board change at one time, neither the school board nor the superintendent of schools can plan and execute any long-time educational policy; and both are forced to consider, altogether too much for the good of the schools, what it is expedient to do. Better men are attracted to the service by a longer term of office and a relatively stable membership. The new members can be gradually initiated into the work and ideals of the board, and an educational policy can be planned and carried out over a longer period of time."

According to the opinion of Drs. Strayer and Engelhardt "a board consisting of from five to nine members, whose terms of office equal in length the number of members of the board,

serving without pay, has been found acceptable in most American cities." Kinston has seven members, each elected for seven years, who serve without pay while the other boards of the city and county receive some remuneration for their services.

Duties of the Board Members.

Concerning the duties of the school board Dr. Cubberley has the following to say: "A school board is elected primarily as a board of school control, to determine policies, select experts, approve new undertakings, and determine expenditures. In all such matters as the outlining and changing of courses of study, the selection of textbooks and library books, the character or the competency of the instruction, the selection, assignment, promotion, and dismissal of teachers and janitors, and the engineering and hygienic problems of schoolhouse construction, boards and their committees should not attempt independent action. Instead experts competent to deal with such problems should be employed, and their opinions sought and followed."

"In case the board doubts the wisdom of an opinion it should either postpone the matter for further consideration with the expert, secure an additional opinion from an outside disinterested expert, or employ a new expert whose judgment they are willing to follow. This does not mean that a board of education will have nothing left to do, though its labors will naturally be reduced."

"Freed from the details of school organization and administration and from the pulls and influences which surround detailed work on many of the larger features of the administrative problem, the board is now free to devote its energies to the problems of its work as a board for school control. These relate to the selection, from time to time, of its expert advisers; the selection of school sites, always with the large future needs of the community in mind; the determination of the annual budget and tax levy; the consideration of recommendations for the expansion of the school system; the prevention of legislation by the city or legislature which is against the best interests of the schools

under their control; and the proper representation, to the people whom they represent, of the work and needs of the schools and the policies of the school department."

"It is these larger problems of control which are most important, but which are almost certain to be neglected when a school board undertakes to transform itself into a board of supervision and to handle the details of school administration. In other words, boards of education should act as legislative, and not as executive bodies, and a clear distinction should be drawn between what are legislative and what are executive functions. The legislative functions belong, by right, to the board. The board's work, as a representative of the people, is to sit in judgment on proposals and to determine the general policy of the school system."

Types of School Board Members.

In discussing the types of board members Dr. Cubberley says: "To render such intelligent service to the school system of a city as has been indicated requires the selection of a peculiar type of citizen for school board members. In many respects it calls for a higher and more intelligent type of community service than is called for in any other branch of municipal work. Remembering that it is the function of the school board to secure experts for the executive work, and to govern by deciding upon the large matters of policy, expansion, and expenditure, and not to administer, in any detail, the school system under their control, we can deduce the type of man most likely to prove useful as a member of a city board of school control."

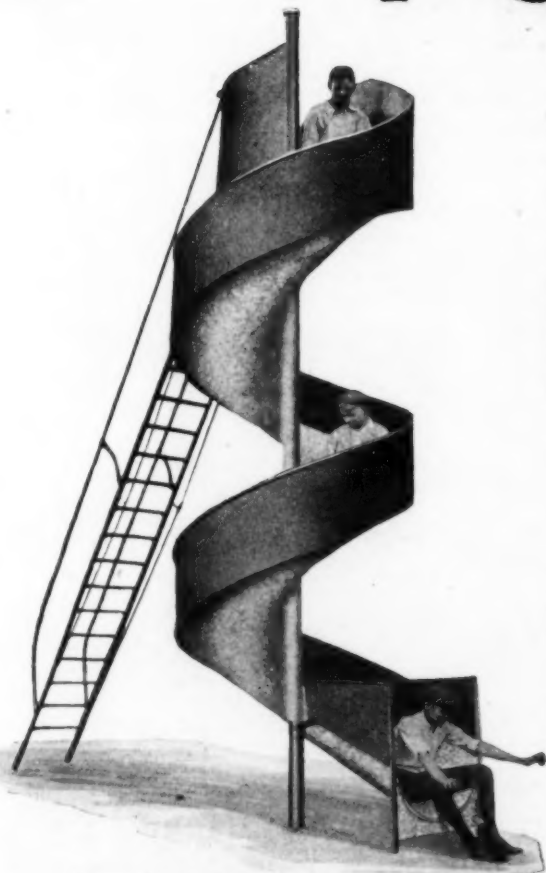
"Men who are successful in the handling of large business undertakings—manufacturers, merchants, bankers, contractors, and professional men of large practice—would perhaps come first. Such men are accustomed to handling business rapidly; are usually wide awake, sane, and progressive; are not afraid to spend money intelligently; are in the habit of depending upon experts for advice, and for the execution of administrative details; and have the tact and perseverance necessary to get the most efficient service out of everybody from superintendent down. Such men, too, think for them-

(Concluded on Page 93)

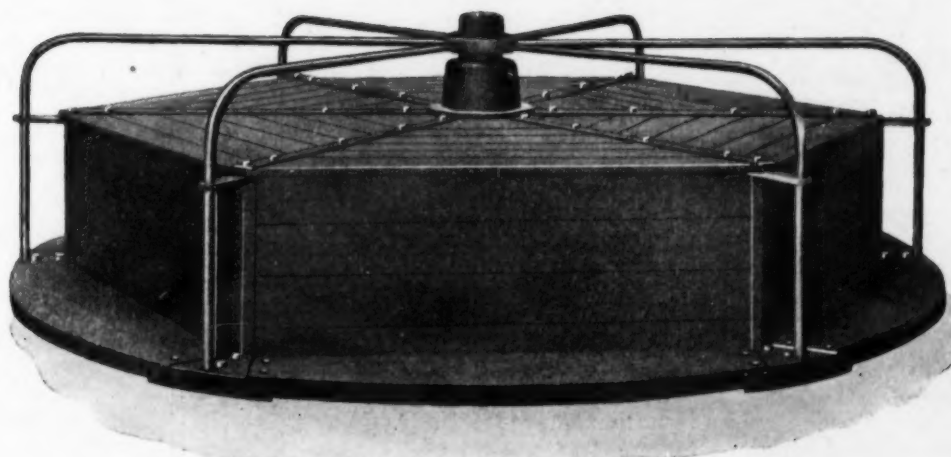
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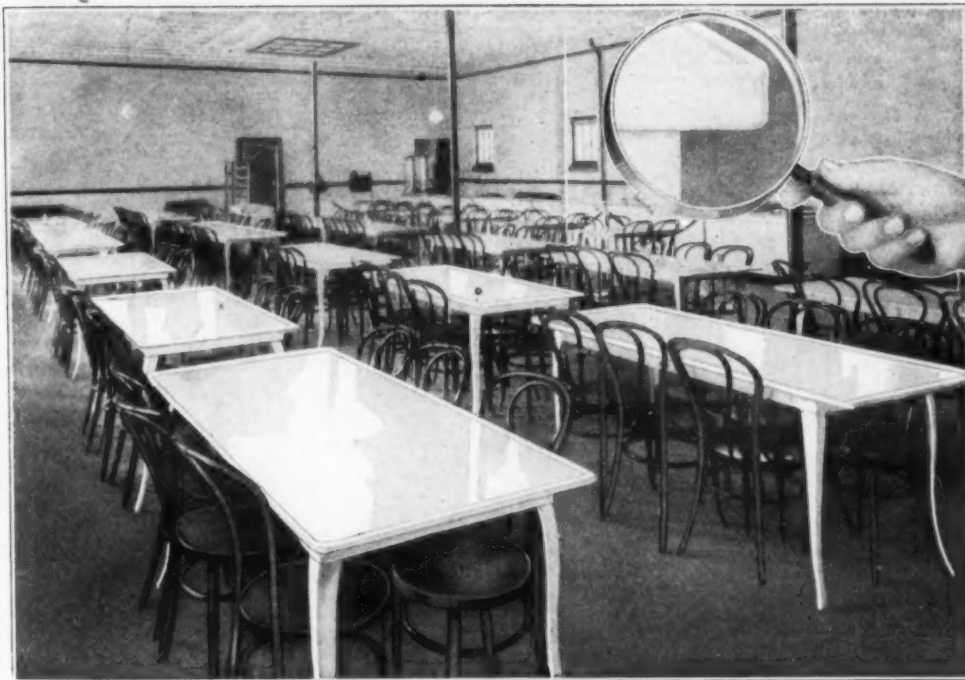
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Waukegan Township High School, Waukegan, Ill.

Installation in Waukegan Township High School Waukegan Ill.



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Sani-Onyx Table Tops are radiantly white, durable, easy to clean and as hard and smooth as polished glass. The "Raised-Rim" (our exclusive patent) prevents chipping and dripping. *Sani-Metal* Table Bases are made of special metal, heavily coated with porcelain enamel. No projections or crevices for dirt and grease to collect.

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TORONTO, CANADA

seives, can resist pressure, and can explain the reasons for their actions.

"On the other hand, the list of those who usually do not make good school-board members is much larger. . . . The crank, the hobby-rider, or the extremist should never be put on boards of education. What is wanted is a sane, an evenly balanced, and an all-around administration of the schools, leaving the details of administration to those who can handle them best."

MICHIGAN SCHOOL BOARDS RESOLVE.

At the recent convention of the Michigan Association of School Superintendents and School Board members held at Ann Arbor, this body placed itself on record as favoring a constitutional amendment whereby the state superintendent of instruction is elected by an enlarged state board of education, instead of by popular vote. Its reasons were enumerated as follows:

1. We believe that educational experts should not be elected by popular vote but by a board which would be able to investigate all possible candidates and select the one best qualified for the position.

2. We believe that the office of state superintendent of schools should be the most important educational office in the state, and that it has larger possibilities than the presidency of the university.

3. We believe that the state superintendent should be an expert educational leader. He should have broad learning, wide and successful experience and strong executive ability.

4. We believe that the election of a state superintendent of public instruction by a board of education is applying to the state the same method by which all city superintendents of schools are elected.

5. We believe that the election of a state superintendent of public instruction by a state board would be a start toward the "short" ballot. The people are now called upon to vote for too many men of whom they know little or nothing.

6. We desire to emphasize the fact that presidents of banks and business corporations and universities and superintendents of city schools

are elected by boards, as they should be, and not by popular vote.

The association also adopted resolutions on parent-teachers organizations, etc., etc., as follows:

That we, the school board members and superintendents of Michigan, recognizing the necessity of the cooperation of the people of any community with the teachers and school authorities, encourage and foster parent-teachers clubs in our several communities.

That the Association recommend increased cooperation between the school board and the superintendent in the matter of selection of teachers, and in other matters of common interest in the administration of the schools; and that the principle be recognized that where responsibility is placed, authority should go also.

That the high school principals in the larger school systems should be accorded the status of experts in secondary education and that superintendents and school boards should seek to encourage these principals to perform more completely their supervisory functions.

FUNCTIONS OF BOARD OF EDUCATION.

Detroit is doing some remarkable things in school administration. For one thing it maintains a research bureau and thus secures a complete perspective on every phase of the school system. Educational bulletins are issued monthly for the use of the school workers thus keeping everybody fully informed.

The last bulletin analyzes the budget requirements for 1922-1923 and makes clear the sums of money required to maintain high standards of efficiency. The analysis begins with a complete inventory of the school plant which fixes its present value at \$37,347,429.21.

The board employs 4,578 teachers, principals and administrative officers. The teachers instruct 136,930 children daily and 23,936 adults weekly. This is 14,240 more children and 10,670 more adults than were instructed the previous year. The building program is based on the anticipated growth and future school requirements.

The purpose of the board is defined as follows: "Briefly, the function of the board of education is to operate the public schools that prepare the children of Detroit for healthy, intelli-

gent citizenship. The schools are the means through which the community is assured of wholesome growth and development."

BOARDS OF EDUCATION.

—Yonkers, N. Y. The common council has recently approved a high school building program, calling for the expenditure of \$2,910,000 for two senior and three junior high schools. The program which has been in process of completion for three months, is intended to relieve the overcrowding in the present high school building which was erected nearly 25 years ago.

—Somerville, N. J. The board of education has appointed an advisory committee of ten members to advise with the members in the erection of a new school.

—The New York City Board of Superintendents will shortly elect a district superintendent to succeed Mrs. Grace Strachan Forsythe, who was chosen on January 25th as associate superintendent.

—Bozeman, Mont. The board has adopted a policy not to reduce salaries of teachers. It is planned to put other economies into effect to effect a material saving in the cost of the upkeep of schools.

—Seattle, Wash. The school attorney has rendered an opinion to the board of education in which he holds the board has power under the law to designate the attendance of school officials at conventions. This authority, he contends, embraces assistant superintendents, superintendents, supervisors of instruction, architect, and other employees whose duties may be prescribed by the board, but does not include the heads of departments, principals or teachers.

—Forty-two former members of the New York City board of education have written the governor of New York State, endorsing the Meyer-Ullman bill which provides that the board of education shall be appointed by a commission composed of the Mayor and the members of the State Board of Regents who live in New York City. In the letter, the members held that board members should be appointed solely because of their fitness, and that the board should be free to administer the funds ap-

MARBLELOID

The Universal FLOORING
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The new Roosevelt School at Johnson City, N. Y., has 30,000 feet of Marbleloid floors. Illustrations show the use of this flooring in plain color on floor and stage of auditorium; and in contrast pattern in main entrance hall. C. Edward Vosbury, Architect, Binghamton, New York.

Marbleloid flooring, as manufactured and laid especially for school requirements, is a sanitary, fireproof flooring, easy to keep clean, and which reduces the sounds from noisy feet.

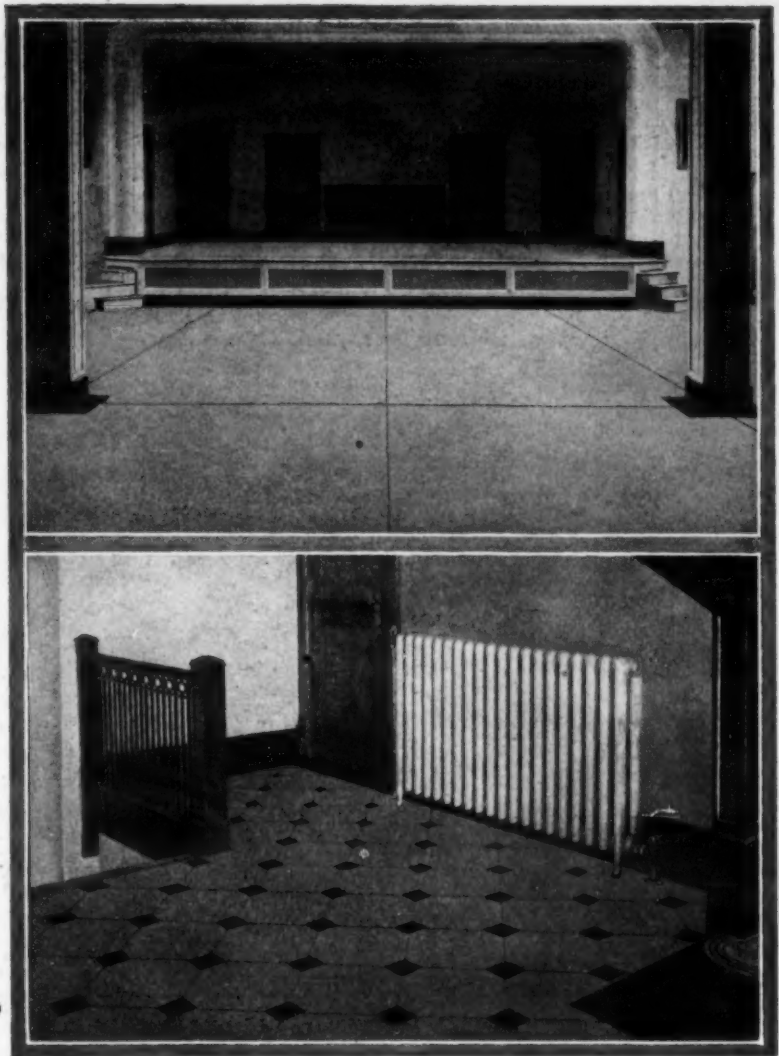
There is a Marbleloid flooring for every room of any school—from the class room to the dormitories. It will be attractive, will not need attention or upkeep, and will last so long that the cost per year is less than that of any other type of flooring.

Let us send you illustrated booklet, together with sample, list of schools using it, etc. Merely write for it.

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propriated for its use without interference from the municipal authorities.

—The school board of Boise, Idaho, has decided to leave the question of teachers' salaries to the last in its retrenchment program. The Statesman of that city says: "And when we do get to salary slashing, it should be the fad teacher who feels the shears first, be sure of that."

—The state board of education of Louisiana will hereafter consist of eight members, five elected by congressional districts and three appointed by the Governor. The creation of the board is now provided by the constitution instead of by legislative enactment.

—Owing to the fact that several thousand pupils refused to become vaccinated, Superintendent W. F. Geiger of Tacoma, Wash., has suspended the order of the health department to make vaccination compulsory.

—Ellwood Souder, president of the Wilmington, Del., school board has been receiving death notes because he favored a \$1,000,000 bond issue for new schools.

—The Peoria, Ill., school board has petitioned the Mayor to place traffic officers at thirteen schoolhouses at noon and after school to protect the children from the heavy street traffic.

"Hardly a day passes that some child does not have a narrow escape from death or serious injury while crossing the street to attend school," says the Springfield, Mass., Union, and urges the police department to afford protection.

—Dr. Edward C. Conroy, chairman of the Lawrence, Mass., school committee, in a public address recently warned against the tendency towards paternalism in the public schools, the lessening of the responsibility of the parent and the throwing of the burden upon the public.

—Dr. C. N. Jensen, state superintendent of Utah, urges district superintendents to support the policy of maintaining the present teachers' salaries. He champions the platform of increased efficiency in the schools.

—The Department of Boards of Education of the Oklahoma Education Association has adopted a resolution favoring the increase of the present school tax levy from 15 to 25 mills.

—The school board of Worcester, Mass., has denied the petition of the teachers to grant full pay while on sick leave. The claim was made

that the teachers frequently contract colds from pupils who are afflicted with them. The board recommended stricter medical supervision of the schools.

—The women teachers of Boston, at a public mass meeting, declared for "equal pay for equal work."

—The teacher's council of North Adams, Mass., has petitioned the school board for an increase of salaries aggregating the sum of \$10,000 annually. The claim is made that the North Adams salaries are below those paid elsewhere and that the city is in a sound financial condition.

—The Chicago board of education has received a petition signed by 6,767 elementary teachers asking for a raise in salary, fixing a minimum of \$1,500, and a maximum of \$3,000 on a nine year schedule.

—Miss Florence Doyle, chairman of the Philadelphia teachers' association, declares that the increased salary now received by them is not going into millinery or evening gowns, but into more learning.

—"School boards of cities and towns in many states are going to play safe with educational standards and, with few exceptions, either maintain or increase the salaries of teachers," says the Gazette of Delaware, Ohio. "That there should be a thought of proceeding otherwise in any general way would appear absurd; but it is just as well that the question should be given an airing, for there is no saying what odd turns may be taken by a general desire to economize through reduced taxation."

—Declaring that children attending the rural schools are on the average less healthy than the children in the cities, a bulletin issued by the University of Illinois urges a better selection of food for school lunches. The bulletin also tells in detail how to make a large variety of sandwiches.

—A special legislative commission has recommended sweeping changes in the school laws of Rhode Island. They provide for an increase in the state appropriations for teachers' salaries from \$120,000 to \$270,000; a minimum salary for teachers of \$650; uniform accounting of school revenues and expenditures and annual budgets; statutory provisions governing construction and use of school buildings.

—"There are really three administrative problems," said Dr. Payson Smith, Massachusetts State Commissioner of Education, recently, "the determination of educational aims, the making of an educational scheme to move in a flexible fashion and the meeting of the needs of the individual student."

—The Spokane, Wash., school board has received a strong protest from the parent-teachers association against compulsory essay writing on the part of pupils.

—Supt. Albert L. Barbour of Haverhill, Mass., encountered a severe school board grilling because he had appointed outside teachers in preference to local aspirants. He demonstrated that the local candidates had been far from required standards.

—Dr. W. M. Storey has been elected president of the board of education at Storm Lake, Ia.

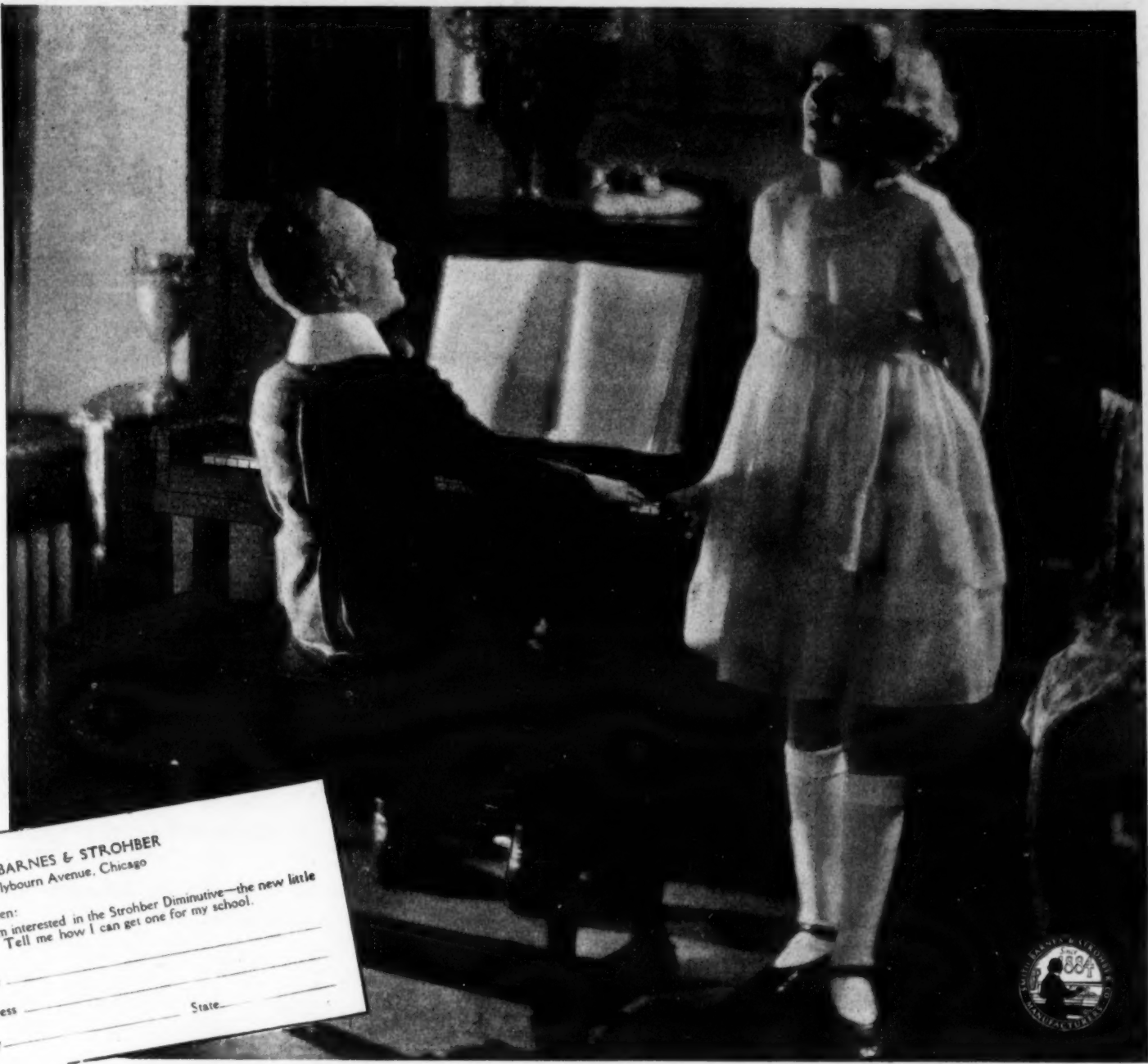
—Danvers, Mass. With the opening of the new municipal year, the wishes of the voters expressed three years ago will have full effect. From now on the school board will comprise three members, instead of nine as formerly. Under the new plan, each year, as the terms of three members expire, one only will be returned. Mr. L. B. Abbott, at one time chairman of the board, was elected over the other two candidates to serve on the new body.

—Victoria, B. C. The city council has referred back to the school board the budget for the year with the request that the salary appropriations for September, October and November be made to conform to the general reductions as recommended in the report of the salary committee.

—A permanent organization has been effected by 35 representatives of school boards at Astoria, Corvallis, Eugene, Salem, Newberg, McMinnville, Forest Grove, Silverton, Lebanon, Albany and other towns. The purpose of the organization is to reduce elementary and high school expenditures as far as possible without impairing the efficiency of the school systems.

—The administrative departments of the Boston school department have been moved to the new quarters at 15 Beacon Street. In the new location, the superintendent's office will be on

(Concluded on Page 97)



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I am interested in the Strohber Diminutive—the new little piano. Tell me how I can get one for my school.

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Poise; a rare quality in children

THE value of music in public schools is recognized more and more these days. You see with the advent of the school piano came an earnest effort on the part of the teachers to make the music hours worth while—each day. They could do it, too, because the new little piano enabled them to undertake more difficult and more interesting music.

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side of school. You are judged as a teacher by their conduct there. Parents are quick to recognize and appreciate those little changes that come in children.

School music is the great promoter of poise. The STROHBER DIMINUTIVE is the great promoter of school music. You can have one for your school—a local music merchant in your community can supply you. We can arrange it for you—mail the coupon.



If you are interested in obtaining a Strohber Diminutive piano for a church, mission, club, Y. W. C. A. or Y. M. C. A., lodge, bungalow in the country, camp or home, we will help you.



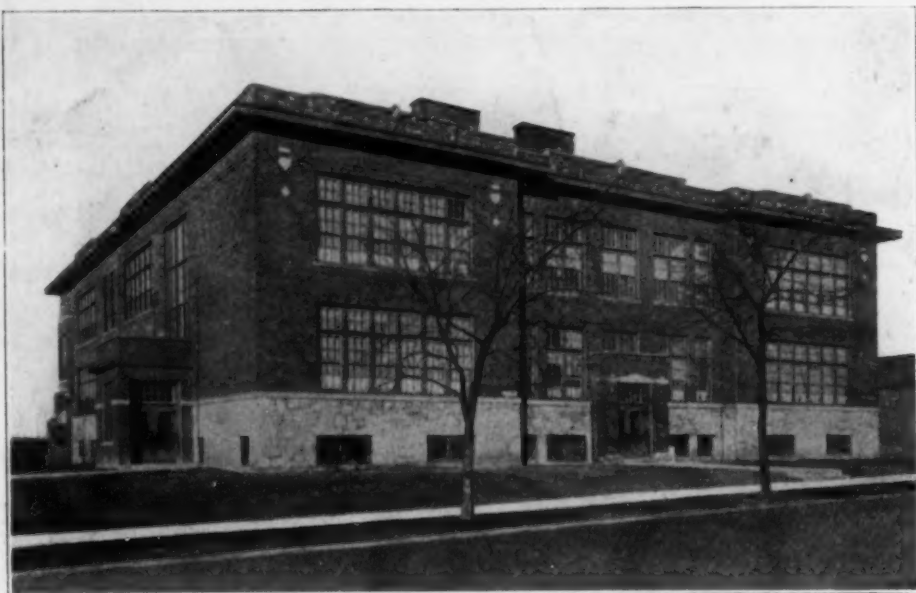
THE Strohber Diminutive is the smallest complete upright piano made; teacher sees the class over its top. Light in weight, can be moved from room to room by two small boys. Full sized keys, standard 88 note keyboard.

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School, Wauwatosa, Wisconsin.

"Children who wilt physically and are mentally atrophied in ordinary school air, become healthy and quick-witted outdoors, and when air in sufficient quantity is admitted to the school room, the same result follows. Fresh air is an economy rather than an expense. It is a process of building up resistance."

Dr. Wm. E. Watt in "Nation's Health."

"THE AMERICAN SYSTEM" PROVIDES MORE HEALTHFUL HEAT AND BETTER VENTILATION AT LESS COST



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BLOOMINGTON, ILLINOIS

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Actual Photograph of Fan Room in the above building.

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removes impurities from air used for ventilating schools and public buildings. A complete conditioner increases or decreases the relative humidity of the air and keeps its temperature practically constant throughout the year.

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A sturdy Peerless Unit in each room supplying pure fresh air to the required amount, with perfect distribution and at the right temperature. The simplicity of the Peerless Unit System means savings in first cost of the building. Having the Unit directly in the room where heat is required means savings in fuel and power bills.

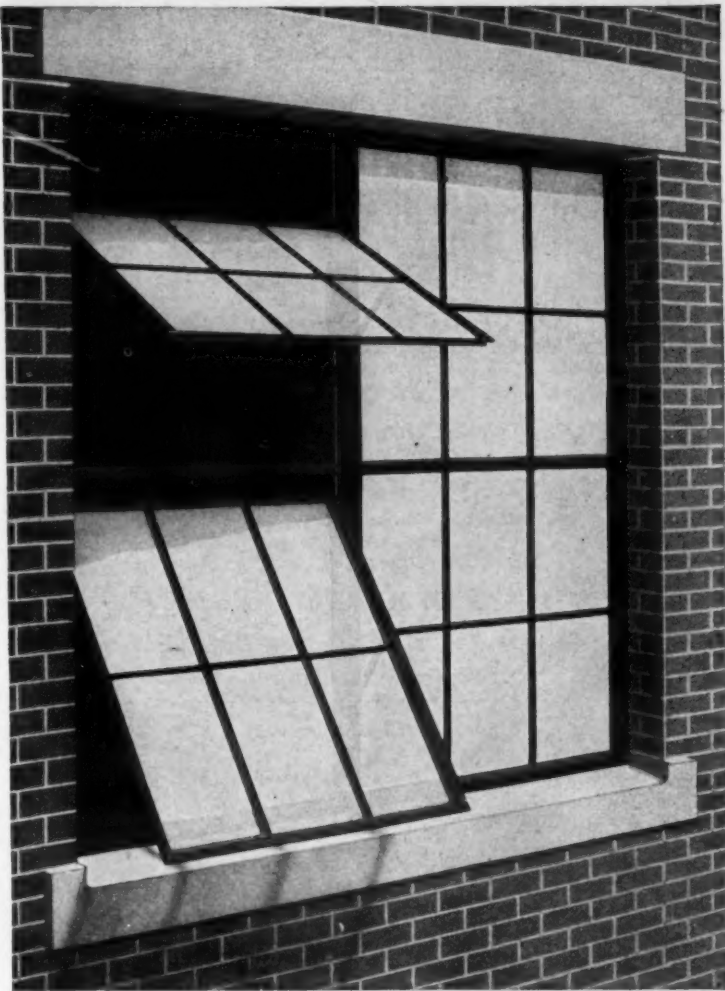
The Peerless Unit is a mechanical gem. The casing is built of heavy steel plate, metal furniture stock and finished in handsome olive green enamel, baked on and rubbed down to a smooth finish. The radiator is of the vento type, noted for its efficiency. The motor is ball bearing and requires practically no attention. The fan wheels are of aluminum, perfect in design and balance. The mixing damper gives positive control of room temperature. Our mixing damper is the best designed for Units.

Peerless Units are the ideal solution of your Ventilating problems.

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Perfection Ventilator **TRUSCON** STEEL SASH

THE window is one of the most important elements of the school, and Boards of Education everywhere are demanding the utmost from their architects and engineers.

The Truscon Perfection Ventilator Sash meets all the requirements for window operating entirely outside the sash frame. The Perfection Ventilator is reversible, facilitating the washing the outside from the interior. The tilted ventilator protects the pupils from direct draughts. Since there are no projections on the interior the windows may be screened and shaded like ordinary double hung windows.

Like all Truscon Steel Sash they are made from solid rolled steel sections. Rigid construction makes it impossible for them to warp or get out of adjustment. Steel Sash are fire resistant, permanent and admit 40 to 60% more daylight than ordinary windows of the same size.

Truscon Steel Sash mean permanence without extra expense. In most cases they actually cost less than inflammable, perishable wooden windows.

It is logical then that Truscon Steel Windows daylight more than 1,000 schools in every part of the country.

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the ninth floor, the rooms for the assistant superintendents on the seventh floor, the secretary's office on the eighth, the offices of the attendance officers and vocational guides on the first floor, offices and meeting rooms for the board on the third, and a library and meeting hall on the second floor. Greater efficiency and economy of operation are expected to result from the centralization of the several departments.

—Chippewa Falls, Wis. The city early in April voted on the proposition to elect a new school board. The old board was voted out of office by a large majority when the people decided in favor of the elective system which has always been in force. The new board will consist of seven members instead of fourteen.

—The Kentucky Senate has passed the Bright bill creating a state board of education composed of eight laymen and the superintendent of public instruction.

The bill calls for an overlapping board which will outline a constructive program. The present board, composed of state officials, will be supplanted by a bi-partisan board of four Democrats and four Republicans, two new members to be appointed each year.

—The school board of Denver, Colo., faces an unusual situation through an error under which a school building was erected on land owned by a private individual. The school was built on three lots which lay between those owned by the board and the twenty which the board sought to obtain. Believing the deal had been completed, an executive of the board went ahead and authorized the construction of the building. The board will endeavor to buy the property in order to settle the difficulty.

—Hamilton, Mass. The board has discontinued the "no school" signal for stormy days. Parents have been asked to use their own judgment in sending children to school in bad weather.

—North Providence, R. I. The board has dispensed with the erection of a new high school. Additions will be built to two schools to relieve the congestion.

—Lancaster, Pa. The court recently refused to throw out of court the case of Supt. S. H.

Layton of Altoona, who is suing the Lancaster board for \$2,138 claimed as salary due him and unpaid by the latter board.

—Oakland, Calif. The newly formulated rules for the school board, which went into effect in the early part of March, may be the cause of legal action, according to an opinion of State Supt. W. C. Wood. Supt. Wood bases his opinion on the fact that the duties of the superintendent may not be distributed as provided in the rules. He contends it is illegal for a secretary and a business manager to share equally with the superintendent in the management of the administrative office.

—Minneapolis, Minn. The advisory committee on buildings has been given permission to lay some eight or ten different types of floors in the corridor of the North High School which has been in a dilapidated condition. The purpose of the committee is to make experiments with various materials to determine their wearing qualities.

—The town of Madison, N. J., has erected a new consolidated school building at a cost of \$160,000. The building provides accommodations for both the grades and the high schools. In addition to a number of special rooms, the building has ten classrooms and a large assembly hall. The building will be used at present for 290 pupils, with provision for about fifty more. The plan for the improvement of the school plant is the result of a special study of the entire building program and the scheme was supported by practically the entire populace of the town.

NEWS OF SCHOOL OFFICIALS.

—The board of education of New York City at its meeting on March 8th unanimously passed a resolution felicitating Commissioner Arthur S. Somers upon the completion of thirty years as a member of the board. During his long period of service, both as board member and as president, Mr. Somers gave unselfishly of his time, his energy and his splendid ability to the educational service of the city. As a member of the board and as president, he has been an eloquent advocate of progressive educational policies, of adequate compensation for both the professional and administrative staffs and

the employees, and of the application of principles of justice to all matters of controversy.

—Prof. Samuel P. Orth, president of the Cleveland board of education in 1905, died in February, at Nice, France. Mr. Orth was the author of the resolution establishing the teachers' pension fund and also introduced the resolution which established the technical high and commercial schools. Prof. Orth was professor of public law at Cornell University and was absent on sabbatical leave at the time of his death.

—The New York City board of education recently adopted a resolution felicitating Mr. Andrew W. Edson who was obliged to cease his educational labors because of having reached the age of retirement on February 1, 1922.

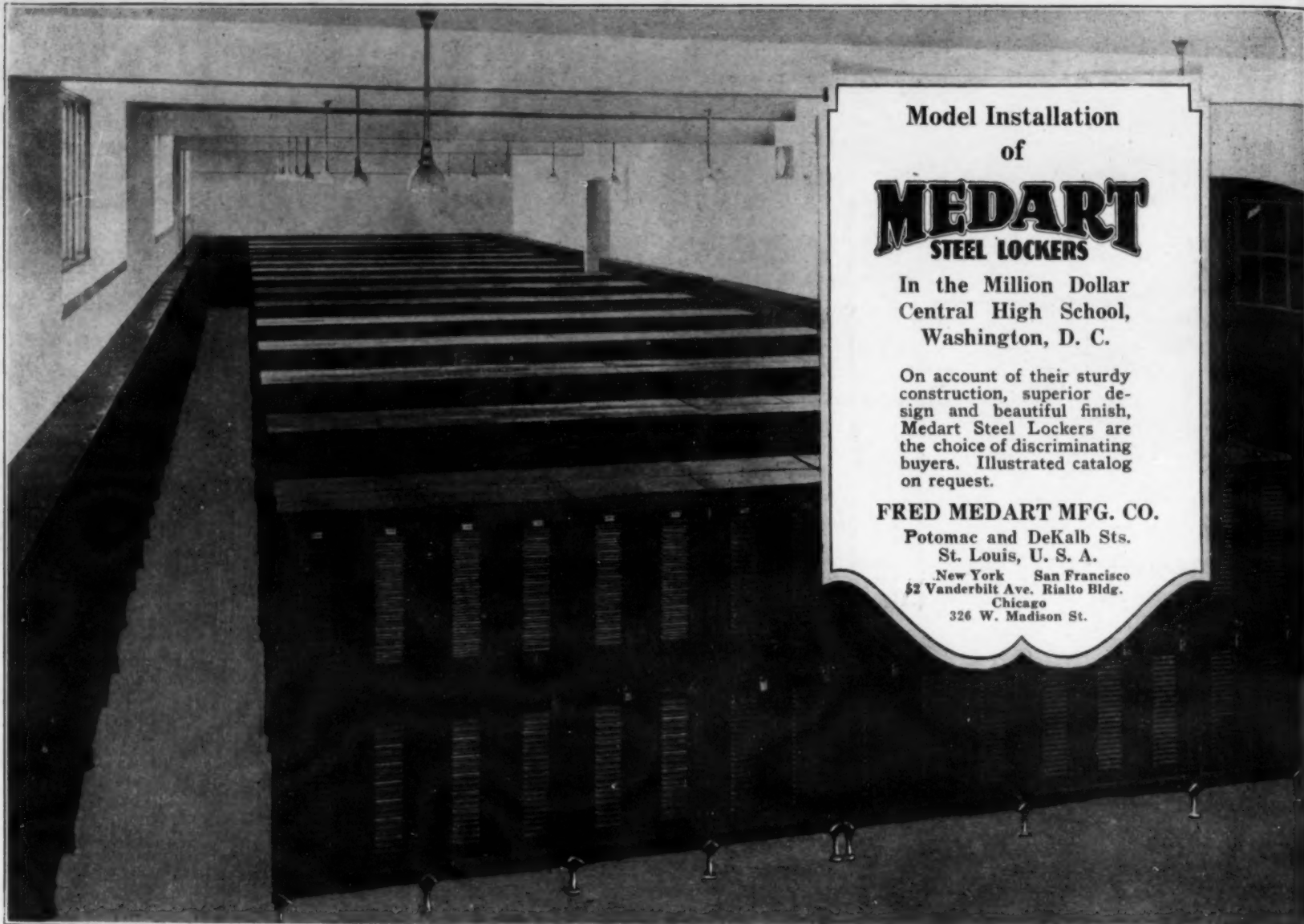
Mr. Edson entered the school system shortly before consolidation of the schools on September 8, 1897, as an associate superintendent in the former City of New York. He had previously had extended experience in high school and normal school work, as school superintendent and in other educational fields, and was considered well equipped for a high position in New York City. During nearly 25 years he rendered excellent service, first as an assistant superintendent, and then as an associate borough superintendent and district superintendent; and in 1902 he was elevated to the office which he filled until a short time ago, that of associate superintendent. He was reelected in 1908, 1914 and 1920.

For several years past Mr. Edson's official work had to do in part with special classes composed of children physically or mentally handicapped, and in this work he displayed intelligent and faithful interest, the results of which will be long felt.

At the recent reorganization meeting of the board of education of Spotswood, N. J., Mr. A. A. De Voe was elected president, succeeding John O. Cozzens, who retires after 45 consecutive years as a member, the greater part as president of the board. Mr. Cozzens was presented with an easy chair, a pipe and supply of tobacco.

—Somerville, N. J. The board has reelected Dr. Wallace F. Naylor as president of the body.

—Dr. J. S. Callen, president of the board of education at Shenandoah, Pa., was honored at



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Central High School,
Washington, D. C.

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the last monthly meeting of the board when he was presented with a basket of flowers as a token of esteem from the directors in honor of his election as second vice-president of the Pennsylvania School Directors' Association.

—The distinguished service of Commissioner Arthur S. Somers to the schools of New York City during a period of thirty years was fittingly commemorated on March 8th at a meeting of the board in a set of resolutions, which were engrossed and presented as a testimonial.

Mr. Somers was first appointed a member of the board of education of the city of Brooklyn in February, 1892, to fill out an unexpired term. In 1893 he was reappointed for a full term of three years, but resigned in October, 1895, to accept the office of civil service commissioner. In January, 1898 he was appointed a member of the school board for the Borough of Brooklyn and in 1899 was reappointed. His service continued until the board ceased to exist in February, 1902.

In November, 1907, he was appointed a member of the board for the Greater City, to fill an unexpired term and also for a term of five years from January, 1908. Five years later he was reappointed for a full term, which ended January, 1918. From February, 1915, to February, 1916, he was vice-president of the board. On January 2, 1918, he was made a member of the board of seven for a term of seven years, and on that date was elected president which office he held until May, 1919.

As a member of the board and as president of it, he was an eloquent advocate of progressive educational policies, of adequate compensation for both the professional and administrative staffs, and the employees, and of the application of justice in all matters of controversy.

—Mr. J. W. Shaw, president of the school board at Enid, Okla., died at an Enid hospital following an operation. Mr. Shaw was 49 years of age.

—Mrs. Ellen Kelliher is the first woman to be elected a member of the board at Augusta, Me.

—Present and past members of the board of education of Glen Ridge, N. J., on March 10th

joined in paying tribute to Dr. H. C. Harris in appreciation of his 26 years of continuous service on the board. A Gorham sterling silver vase was presented to Dr. Harris together with 26 American Beauty roses, symbolic of Dr. Harris' years of service.

School Administration Notes

CANNOT LEGISLATE ECONOMY.

There is a multiplicity of ways whereby we can cut school expense before we swing the axe at the teacher's neck. If we dislike the expensive curriculum and teaching methods of our schools, the directors' leagues of the state should seek a remedy by coordinate demands on the state board of education for relief. Instead of doing this, we howl, and blame the teacher for making snobs of our kids. The idea of legislating economy or efficiency into our schools is chimerical.—O. Perkins, Member School Board, Dist. No. 19, Bellingham, Wash.

ADMINISTRATION NOTES.

—The use of old police stations, abandoned by the reorganization plans of the police department, for classrooms to relieve the congestion in the New York City schools, has been recommended to the board of education.

—The town of Greenwich, Conn., will hold an "education week" during the week of May first, under the auspices of the Women's Club, with a number of other organizations cooperating. It is planned to have an exhibit of charts and diagrams showing school costs, and a pictorial display of school buildings, particularly of high schools in small cities.

—The schools of Tacoma, Wash., did not open on March 13th because of the action of the

board in advancing the Eastern vacation two weeks. The action was taken to checkmate an order of the city health officer suspending from school attendance children and teachers who remained unvaccinated. Under the order seven thousand pupils and teachers who refused to be vaccinated within a thirty-day time extension limit, are forced to stay out of school eighteen days in home quarantine because of having been generally exposed to a smallpox epidemic. The board by its move has eliminated the possibility of arrest at the hands of the health officer, and at the same time has saved the \$40,000 school revenue from the state which would have been lost by the enforcement of the eighteen day quarantine order.

—Olympia, Wash. The terms of the present school directors will be extended rather than shortened as a result of a Supreme Court decision affirming the King County denial of a writ of mandamus against School District No. 1. Mr. W. C. Pendleton filed as a candidate for the election in May for the term beginning the first Monday in January, 1923. The school board refused to enter his name on the ballot, claiming the law provided only for the election of a director to assume the place of one whose term had fully expired in June following the election. The court held that Pendleton could not file until May, 1923.

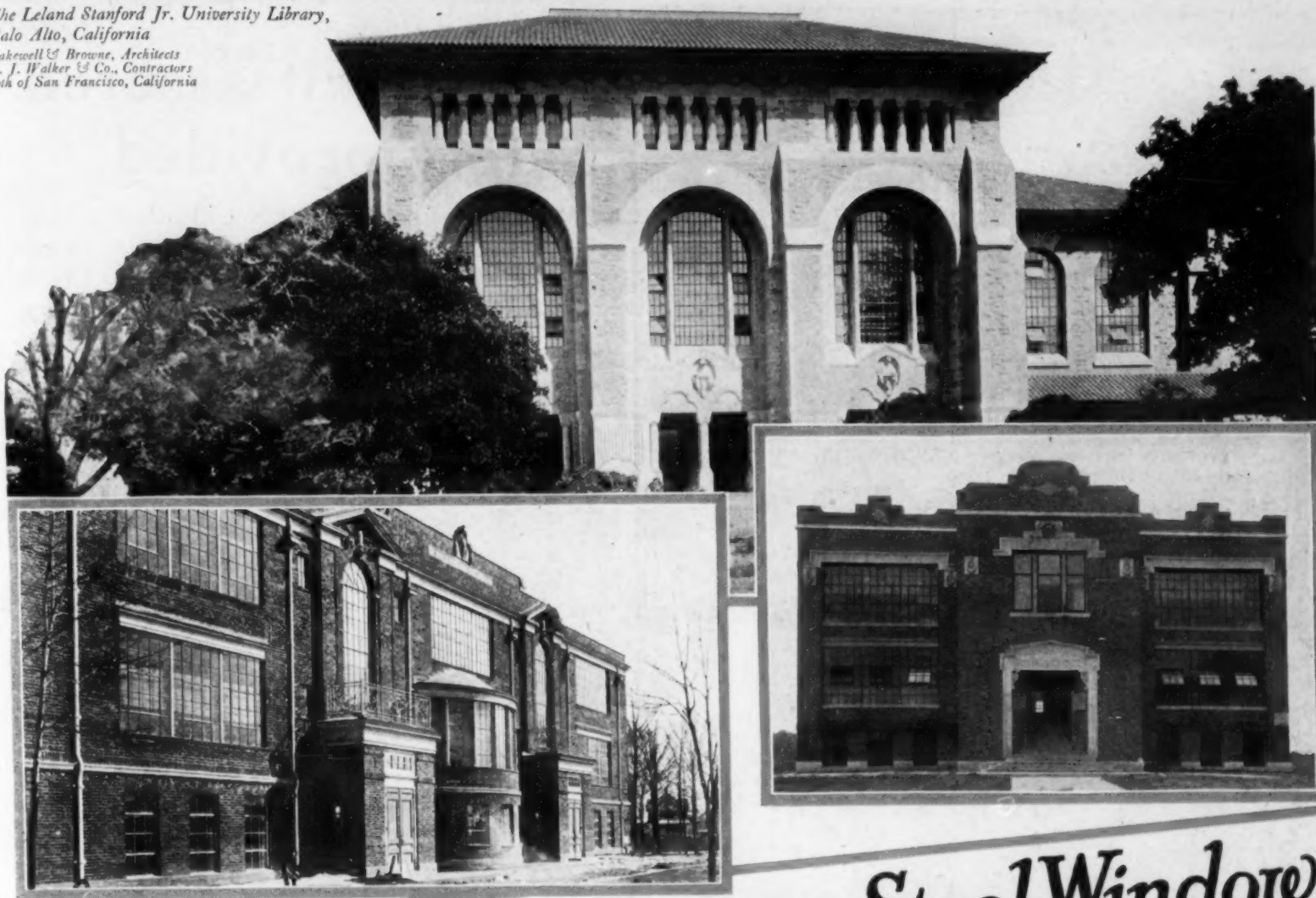
—Terre Haute, Ind. More than \$52,000 have been saved by the school children under a school system of banking. The children make weekly deposits and the money is later deposited with the various trust companies of the city.

—Haverhill, Mass. A marked increase in absences in the high school has made it necessary to adopt new regulations. A rule has been adopted providing that students who absent themselves from school must bring a note from home the following day giving the reason for the absence and carrying the signature of the parent or guardian. Any pupil who fails to bring the excuse will be sent home and will be compelled to make up the lost time.

—Meriden, Conn. Overcrowded conditions in the high school have made it necessary to inau-

(Continued on Page 101)

*The Leland Stanford Jr. University Library,
Palo Alto, California
Bakewell & Browne, Architects
P. J. Walker & Co., Contractors
both of San Francisco, California*



A New Type of Fenestra Steel Window Designed Especially for Schools

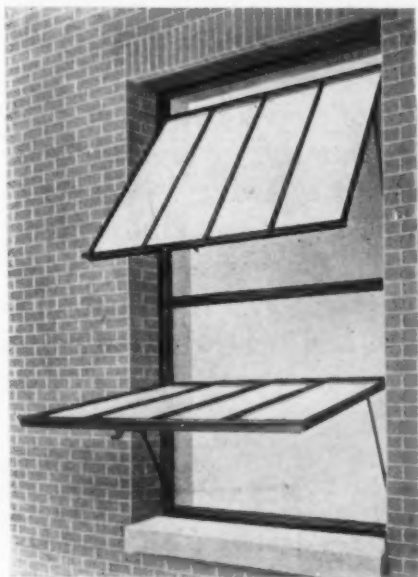
The need for an economical, practical, and highly-refined type of window for school buildings has been conclusively met through the development of Fenestra Reversible Ventilator Sash. This newest type of steel window was designed to conform with the exacting requirements of school buildings.

From a standpoint of design, architects find that slender steel bars and large glass areas open greater possibilities for a satisfying expression of their art.

From the price angle, Fenestra Steel Windows effect a decided economy. Not only is the original cost less than wood windows, but a marked saving is accomplished in installation and maintenance costs.

Finally, the abundance of daylight and ventilation secured creates ideal classroom conditions. Being fireproof, they provide added safety and protection. And through their scientific construction, ease of operation is insured at all times.

The illustration at the left shows a Fenestra Reversible Ventilator Sash. We shall be glad to supply general details or specific information regarding this improved type of steel window to those interested in modern school building construction.



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Detroit Steel Products Company

2249 East Grand Boulevard, Detroit, Mich.

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A Life Lost Is Gone Forever

A school building, however beautiful and costly, can always be duplicated after destruction by fire. But the precious human lives can never be replaced.

Dow Spiral Slide Fire Escapes *protect lives*. They eliminate the worst danger of a school fire—panic—because their performance is independent of discipline and presence of mind.

No treacherous stairs or steep fire escapes to negotiate. No dark, winding, narrow passages to be threaded. Each floor is emptied separately from a convenient, predetermined point. A quick, involuntary slide carries the children to the open air—and safety.

Prevent a horror in your school. Write for complete information today.

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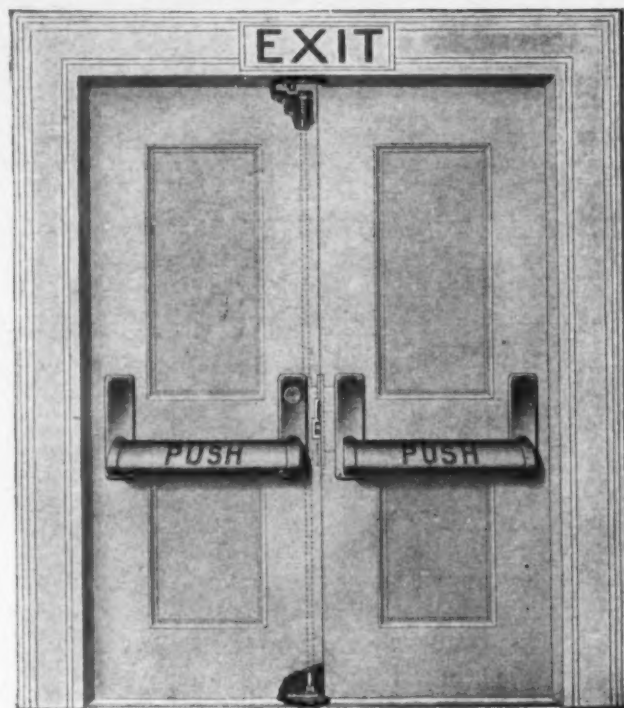
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Quick exit assured Safety provided

Members of school boards and other officials on whom the responsibility rests should make full provision for protection to life in case of panic by the use of this safety device.



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Fire Exit Door Bolts

as illustrated above, are attractive in appearance, strong in construction and quick in action. The construction is such that in operating the push bar the hands or arms cannot be caught between the bar and the door.

They have a wide push bar which projects only 2½ inches from the surface of the door, permitting the door to swing wide open so as not to obstruct passage through the doorway. Slight pressure on the bar at any point will release the bolts instantly. All edges and corners on the bars and brackets are carefully rounded, eliminating all possibility of wearing apparel becoming accidentally caught.

Sargent Fire Exit Door Bolts, Locks and Hardware are sold by representative dealers in all cities.

SARGENT & COMPANY, Manufacturers

New Haven, Conn.

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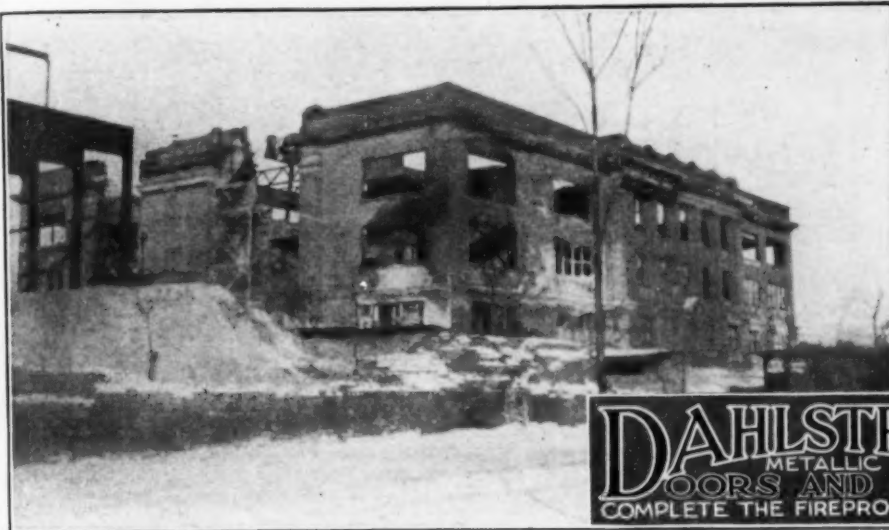
Chicago

THE FIREPROOF SCHOOL

Brick, steel and mortar will not make a fireproof school when wooden doors and trim are used. In case of an incipient fire, there is nothing at the openings to prevent or retard its progress.

Hollow metal doors and trim not only offer complete fire resistance for such trim, but give sanitation and low cost of upkeep as well.

It is sanitary because a damp cloth passed over the surface will keep it clean and will not dull or harm the finish. Dahlstrom doors and trim are finished by a baked-on-enamel process.



DAHLSTROM
METALLIC
DOORS AND TRIM
COMPLETE THE FIREPROOF BUILDING

A WORD ABOUT UPKEEP

Low cost of upkeep is insured through the rigidity of the manufactured product. It is protected against climatic changes and built to last. Installations of nearly twenty years have never required repairs.

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NEW YORK 25 Broadway DETROIT 1331 Dime Bank Building CHICAGO 19 So. LaSalle St.
Local Representatives in Principal Cities.

(Continued from Page 98)

gurate a two-session plan with the opening of the new school year next fall. Under this plan, the supervised study period will be discontinued and a return made to the forty-five minute period. The freshman classes will recite in the morning and the remaining three classes in the afternoon. The close of the year will end military training as a school feature.

The board has also advanced the ages of children entering the kindergarten from four to five years, and those in the first grade from five to six years.

—Pittsfield, Mass. Intelligence tests have been introduced in the schools. The tests are expected to eventually lead to the establishment of clinics under state supervision for the treatment of backward pupils.

—Knoxville, Tenn. The board of education proposes the elimination of supervision in the schools. The change would effect a saving of \$6,000 in administrative expense.

—Portland, Me. A change in the school supervisory system is proposed by Supt. Wm. B. Jack as a means of giving grammar principals administrative supervision over both primary and grammar schools in their districts. The city is to be divided into eight districts and pupils will remain under their particular supervisors from the time of entrance to the time of leaving school.

—Dubuque, Ia. The board has adopted a rule governing the entrance of children in kindergarten classes. Only children who are five years of age or over before April first may be admitted to kindergarten classes for the semester beginning in February. Children of the proper age may not be admitted to classes after April first because of the interference with the regular order of work and the development of the children. An exception is made in the case of children whose parents move to the city from another city and also children who have not been able to enter because of illness.

—Norwalk, Conn. The school board has determined to push to trial the mandamus proceedings begun by the board last year against the city board of estimate, requiring the latter to furnish amounts for school expenses as asked by the education board in its budget. The court

trial will put to a test the new state law which gives the educational board final power over the budget, except that part concerning new buildings. Since the law was passed, the city estimate board has reduced the budget as prepared by the board.

—An editorial in the *School Board Journal* for March discusses the survey made of the school administrative methods employed at Wheeling, W. Va. The point at issue was that the school board had performed the bulk of the labors ordinarily assigned to the superintendent.

The announcement has since come to us that the school board adopted the following resolution:

Resolved, That hereafter all principals, supervisors, directors, teachers, librarians, nurses, clerks, janitors, and other employees (except the clerk of the board) shall be employed, promoted, demoted, transferred, retired, or dismissed, exclusively upon the written recommendation of the superintendent of schools, subject to the approval of the board.

—El Paso, Tex. A survey of local government activities, including the schools, has been inaugurated. The survey was deemed necessary by reason of the increase in city taxes and the inquiry into the wisdom of the expenditures. The expense of the survey will be borne by the various civic organizations of the city. It is expected that the survey will be constructive in its character and will point out needs that call for expenditures as well as expenditures that call for disapproval.

—The school board of Worcester, Mass., has adopted the recommendation of the superintendent that the no-school signal on stormy days be rung as follows:

At 7:30 A. M. for high and preparatory schools for all day and elementary schools for the morning session.

8:00 A. M. for two session schools for the morning session.

11:45 A. M. for the afternoon session of all schools whose regular afternoon session begins before 2:00 o'clock, including the afternoon session of the High School of Commerce.

1:15 P. M. for the afternoon session of schools whose regular afternoon session begins at 2:00 o'clock or later.

—Boston has been relieved of continuation school expense caused by its suburbs, by the passage of a new bill which provides that every city and town shall pay for the education of its pupils in these schools, whether they attend a school in their own city or town or not. The bill protects Boston from the outlying cities and towns which have made it a practice to send their pupils to Boston schools without paying for the expense. In the future tuition for such pupils must be paid by the city or town from which the pupils come.

—The teachers' advisory council at Covington, Ky., has asked the board to adopt a ten-month school term for the next year. The board pointed out that additional funds raised by increased taxes will not be available until June, 1923.

—Supt. David Gibbs of Meriden, Conn., declares school visitors are not detrimental to classwork and urges parents of school children to visit the schools more frequently both for their own information and for the interests of the pupils themselves. Mr. Gibbs does not share the opinion of one Connecticut superintendent who holds that visitors are detrimental to the schools but points out that frequent visits result in better understanding between parents and teachers. He believes there is no better way to meet unfavorable criticism than to ask the critical individuals to visit the schools and see the work performed.

—Lynn, Mass. The board has prohibited ball playing in the school yards as a result of the number of windows which have been broken by youthful players. The lack of screens makes it necessary to protect the windows from breakage.

—Lowell, Mass. The school committee, by a vote of five to four, has refused to authorize the chairman and superintendent to ask the city solicitor for an opinion as to the legality of electing a teacher without the recommendation of the superintendent.

—The executive secretary of the Board of Commerce, New Bedford, Mass., has prepared figures showing that twelve cities in New England besides Boston pay a higher salary to their superintendents than New Bedford. Four out of the 33 cities included in the list pay the same

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315 Hubbell Bldg.
2014 Wyandotte St.
509 Occidental Bldg.
1212 Chemical Bldg.
708 Builders Exchange
808 1st Natl. Bank Bldg.
SAN FRANCISCO

SALT LAKE CITY
MILWAUKEE
PITTSBURGH
DALLAS
DETROIT
TOLEDO
CLEVELAND
ATLANTA, GA.
72 Fremont St.

Scott Bldg.
Mer. & Mfrs. Bank Bldg.
945 Oliver Bldg.
Southwestern Life Bldg.
1772 Lafayette Boul.
1121 Nicholas Bldg.
706 Rose Bldg.
1524-25 Candler Bldg.

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salary as at present paid in New Bedford, which is \$5,000 a year.

Boston pays \$10,000 a year for its superintendent. The salary from there drops to \$6,300 paid by Waterbury. Seven cities pay the next highest scale of \$6,000, which makes \$1,000 the amount by which the New Bedford rate is exceeded by any considerable number.

Portland, Me., is the largest city in New England paying a salary to its school head of less than \$5,000. The scale there is \$4,700. The scale in New Hampshire is also smaller. Haverhill and Newton are among the cities in Massachusetts of smaller population than New Bedford which are in the \$6,000 salary list.

Connecticut has generally the highest salary scale of any of the New England states. Though the range is higher there, Hartford, third largest city in the state, and one of the wealthiest, pays only \$3,000. The list of cities by states follows:

Boston, \$10,000; Brockton, \$5,000; Cambridge, \$6,000; Fall River, \$5,000; Fitchburg, \$4,500; Haverhill, \$6,000; Holyoke, \$4,200; Lawrence, \$4,900; Lowell, \$5,000; Lynn, \$3,900; Malden, \$4,500; New Bedford, \$5,000; Newton, \$6,000; Quincy, \$5,500; Salem, \$4,000; Somerville, \$5,000; Springfield, \$5,800; Taunton, \$4,300; Waltham, \$3,500; Worcester, \$6,000; Portland, Me., \$4,700; Concord, N. H., \$4,000; Manchester, N. H., \$4,500; Nashua, \$3,500; Newport, R. I., \$4,000; Pawtucket, \$4,500; Providence, \$5,500; Woonsocket, \$3,500; Bridgeport, Conn., \$6,000; Hartford, \$3,000; New Britain, \$6,000; New Haven, \$6,000; Waterbury, \$6,300.

A SUPERVISOR'S FUNCTIONS AND RESPONSIBILITIES.

A valuable analysis of the functions of a supervisor of elementary grades and of duties and responsibilities attached to the office, has been prepared by Miss Ella A. Fallon, New Britain, Conn. It forms part of her report as supervisor of primary grades. In explaining that she is cooperating with principals and supervisors of special subjects and is responsible for the direction, guidance, inspiration and continued growth of teachers in their work, and for the satisfactory progress of the children, she writes:

"I. Fundamental to a successive meeting of this responsibility the supervisor must have

(1) "Definite acquaintance with the policies and practices approved by the school committee and the superintendent of schools, as they affect the elementary schools;

A letter will be sent to each candidate for the legislature asking if he will support laws for education for a minimum or minimum-maximum salary for teachers and for modified taxation. A resolution adopted sets forth that the constitutional convention let slip the chance to make possible tax reform along scientific lines and that hereafter increased revenues for school support must come from not higher permissive rates of taxation but through a thorough reform of the revenue system.



THE PHILADELPHIA SCHOOL SURVEY.

The results of the school survey in progress in Philadelphia for the past two years, were announced in a public address by Dr. T. E. Finegan, state superintendent of public instruction. He prefaced his report by stating that its purpose was "to arouse the professional staff, the teaching body and the board of education to the necessity of examining their own system of determining its defects and of devising scientific remedies."

He noted the fact that the work of the upper grades displayed greater efficiency, and that the high schools lacked in unity of conceptions and ideals. He advised a greater coordination between the secondary and other schools.

"Plans and policies for the administration of these schools having been adopted by the board, adequate authority for their execution should be vested in the board's chief executive officer, the superintendent of schools."

"If the city is to discharge its obligation to the boys and girls who are to go into industrial life," Doctor Finegan said, "it should enter at once upon a well-conceived program for the development of trade and industrial schools and classes which meet the standards generally accepted throughout the country."

Similarly, the educator impressed his auditors with the insufficiency of the home economics courses offered in the schools. Eight out of every ten girls in Philadelphia will take up the vocation of homemaking at some time in their lives, he said, and therefore unit year elective courses in home economics should be offered in the high schools.

"It cannot be too emphatically stated that the general condition of Philadelphia's school plant is deplorable," he said.

"Nearly 40,000 elementary pupils are on part-time attendance because of lack of sufficient classrooms, and the high school pupils are handicapped by the heavy overcrowding of their classes.

"There is a real hazard to the children of Philadelphia in the fact that 74 per cent of the school buildings are not fireproof and are not equipped with modern fire protection apparatus. The system of fire drills and the devotion and competence of the teaching forces afford the chief protection to most of the children in times of danger from fire.

Other phases of the school system touched upon by the state superintendent concerned the medical department of the schools which, he said, should be enlarged; the teaching force, which, he explained, has an outstanding vital weakness in that it lacks a corps of instructors from outside of Philadelphia and more supervisors; the need for periodically revising the courses of study.

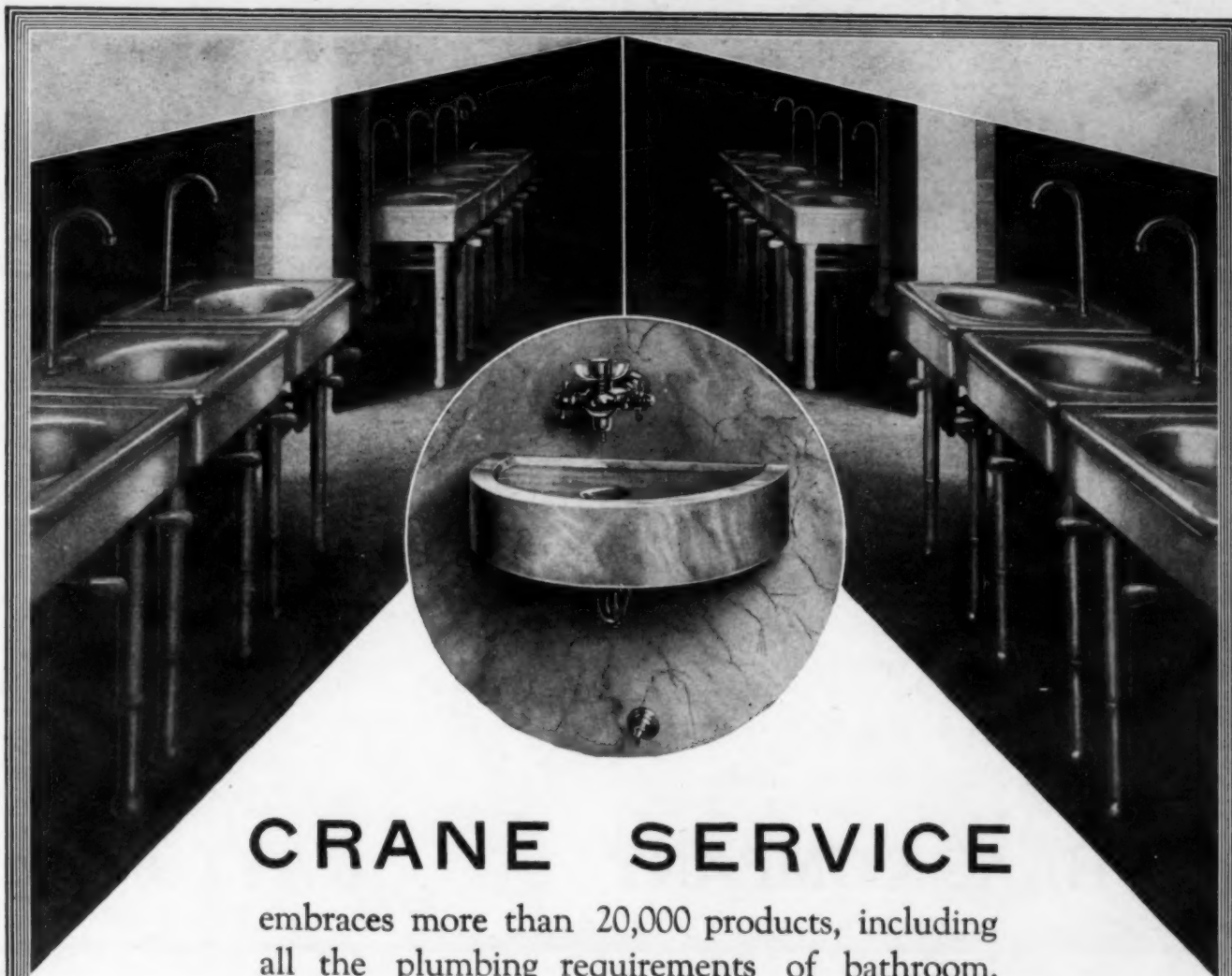
In conclusion, Dr. Finegan urged an \$80,000,000 schoolhouse program covering a period of twenty years.

AMONG SUPERINTENDENTS.

—Tardiness is to be met with severe treatment in the high school at Haverhill, Mass. Unless satisfactory excuse can be made pupils will be punished as follows:

First time late—an afternoon in the detention room. Second time—from two to five after-

(Concluded on Page 105)



CRANE SERVICE

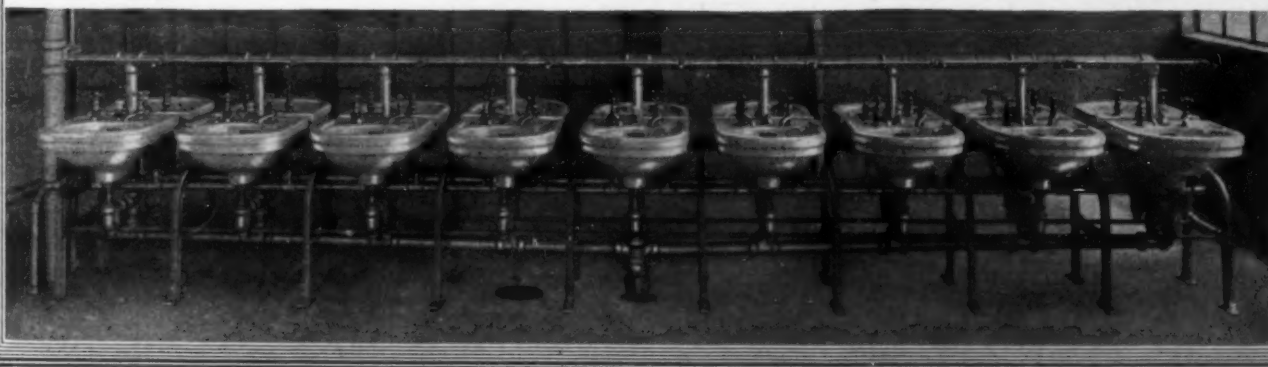
embraces more than 20,000 products, including all the plumbing requirements of bathroom, kitchen, pantry and laundry; valves, fittings and piping for heating, ventilating and refrigeration systems, as well as the most accurately designed steam specialties for the dependable operation of a modern industrial power plant.

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One to meet the demand for any type or class of service.

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illustrated herewith is a serviceable popular priced combination acceptable for houses where water in volume is to be had. The valve is built simply with few working parts and is guaranteed to deliver good service *continuously* at small upkeep cost. "Haas" Equipment offers a distinct advantage in that it can be applied to practically any bowl. In the replacement of *obsolete* or *worn out* equipment, this feature will make a strong appeal.

"Haas" Valves have a record of performance unsurpassed by any other and *it is the valve that makes the difference between dependable toilet service and a costly outlay for repairs.*

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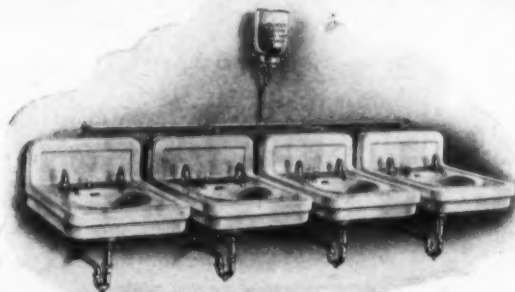
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MANUFACTURERS SINCE 1855
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An Ideal Soap Fixture For Schools

Here is a new soap system—sanitary, convenient, economical; operating wholly on the time-proven gravity principle. Has no moving parts to get out of order.

A simple valve delivers the right amount of soap without drip or waste, from one large container, easily filled.

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Watrous Patent Plumbing Fixtures represent the most advanced ideas developed in plumbing science. They include Watrous Duo-jet Closets, Flushing Valves, Self-closing Cocks, Urinals, Drinking Fountains, etc. Complete catalog will be sent upon request.

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IMPERIAL WATROUS PRODUCTS



A cool, refreshing drink

Remember how much we enjoyed it, especially after romping about during the noon and recess periods? In those days, however, we didn't have the many modern and healthful conveniences of today, and we were all obliged to drink from an old battered tin cup. Today the children can enjoy a cool, refreshing drink, just as we did years ago, but with the assurance of absolute safety—no fear of contamination.

Rundle-Spence "Vertico-Slant" Drinking Fountains

feature a "protecting jet" which absolutely eliminates all possibility of contamination. They are positively germ proof—correct in design—durable in construction, plus, economical in cost.

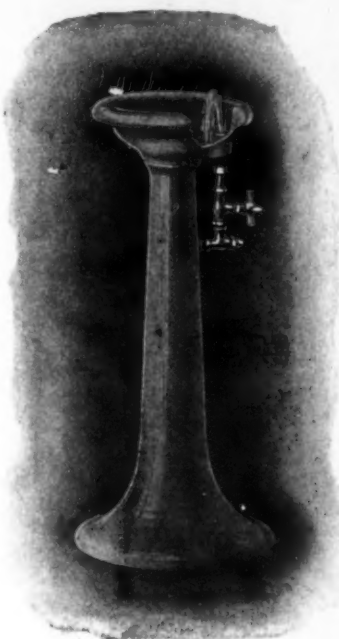
Rundle-Spence "Vertico-Slant" Drinking Fountains have no hoods on which the corner of the mouth can rest—no filth collecting crevices that are impossible to clean. The bowls are of extra heavy vitreous china—of free open construction—and are principally and essentially, sanitary in every respect.

Made in a variety of designs to meet every requirement.

Rundle-Spence Mfg. Co.

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Milwaukee, Wisconsin



No. C-143



No. C-92

(Concluded from Page 102)

noons in the detention room. Third time—five afternoons in detention room. Fourth time—probable dismissal from school.

—Dr. Charles S. Foos who has served for thirty years as superintendent of the Reading, Pa., schools has resigned owing to ill health.

—Payson Smith, state commissioner of education for Massachusetts in a recent public address opposed the establishment of a federal department of education with a cabinet officer as its head. He held that the progress of education in the public schools of this country is better assured under municipal and state direction than through national standardization and control.

—"The school system will either periodically take an inventory of school affairs and make public its profit and loss, or it will proceed on something like a daily balance system and keep the public informed," said R. G. Jones, superintendent of the Ohio schools recently.

—Prof. John Dewey, of Columbia University, has given his support actively to the union movement among teachers. The support of Professor Dewey is regarded as aiding great impetus to the plans approved recently for amalgamating into one big union the existing locals of the American Federation of Teachers, with a membership embracing all ranks of teachers from the kindergarten to the university.

—As a matter of economy the school board of Burley, Idaho, has combined the superintendency and high school principalship. H. M. Broadbent, the present superintendent, has been elected for the position.

—Rooms for slow children have been in operation for two years at Westport, Conn. Under Miss Amy B. Dodge the work in the Bedford School has been very successful. The plan is likely to become a permanent part of the educational program of Westport.

Beginning in September, 1921, a new regulation of the school committee concerning the leaving grade of children became effective. Now children must complete the eighth grade before they may leave school unless they are 16 years of age. This threw into the junior high school a group of children who were not able to carry successfully the work as at present organized.

At this time the Terman group tests were given to all pupils in the junior and senior high schools. Those of the seventh and eighth grades whose scores were low were given the Terman individual test. In this manner a group under a special teacher was formed from these grades of those whose intelligence quotient was 76 or below. With eighteen in the room the teacher arranges and adapts the work according to the ability of each child. The details of the work must grow out of some experimentation but in general the class will be given much more manual work than classes of normal children receive.



FRANK B. COOPER.

FRANK B. COOPER RESIGNS.

One of the most interesting figures in the educational field of America, Frank B. Cooper, superintendent of the Seattle, Washington, schools, will retire August 1st of this year.

Mr. Cooper's career has been that of a successful school superintendent. He began in a small town, as so many educators do, labored for years with zeal and fidelity in the cause of popular education, and left the crowning impress of efforts with a great Pacific Coast city.

Frank B. Cooper is a native of Illinois where he received his earlier training which he completed at Cornell University. He began his career as a school superintendent in the city of Le Mars, Iowa, and served there from 1883 to 1890. He then became professor of education at the University of Iowa remaining for one year.

Thereafter, for eight years, he was superintendent of the Des Moines, Iowa, schools, and then came to Salt Lake City, Utah, where he served in a similar capacity for two years, from 1899 to 1901, and from there went to Seattle, Wash. Here he made his great contribution to the cause of education. During the period of service here the grade school attendance increased five-fold, and the high school attendance fourteen-fold. He held consistently to high ideals, the best thought in educational method, and the most approved policies in administration.

He was sufficiently strong as a leader to win the school public for his cause—the cause of popular education as he saw it—and for the manner of its realization.

When the era of retrenchment in the cost of the schools recently struck some of the western cities, the press and public of Seattle became vociferous and over-anxious. But, Cooper braved the passing storm with dignity and calm, and awaited the return of reason and reflection. The integrity of the schools must be maintained, and Seattle was, at heart, too progressive to subject the schools to a policy of retrogression and decline.

As an old warrior in the field of education—that field which encounters popular whims and notions—he had braved many threatening sit-

Here are Three Features of the Speakman Institutional Showers that Insure Economy in Water

The Mixometer gives any desired shower temperature—instantly—without waste.

Lock-Shield Controlling Valves allow the water to be cut down to 6 gallons per minute—enough for a shower when the Speakman Kas-Bras head is used.

Kas-Bras Head is drilled so that spray is thrown on the bather—not wasted around him. The head is supplied with a volume control when specified.

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Institutional Shower
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batteries.

uations which he overcame through a firm grasp of the mission and purpose of the public schools and their relation to the stability and progress of the nation. He never wavered when the advancement of the schools was at stake, and fearlessly championed the highest and best educational thought and method.

We hate to see Frank Cooper pass from the educational horizon, but find consolation in the fact that he still has some useful years before him and that these will be utilized in making further contribution to the welfare of mankind.

RE-ELECTION OF WALTER E. MILLER.

The board of education of Knoxville, Tenn., is congratulating itself upon the fact that it has put the superintendency of city schools out of the arena of politics for at least the next three years. A few years ago personal or partisan politics brought into being a municipal ordinance which limited the terms of office of the superintendent of city schools to one year. Last December this ordinance was changed, making the maximum term three years.

The board of education availed itself of the change in the ordinance and reelected Walter E. Miller for a term of three years, beginning July 1, 1922, with a salary fixed at \$4500 and \$250 additional per annum for automobile upkeep. He has been serving the city for eleven years, and is regarded as a schoolman of the highest and broadest order. He has been actively engaged in school work for the past thirty years. Progressive, and with a strong sense of the fitness of things, he has exhibited skill in the selection of teachers and the power of teaching teachers how to teach, as well as executive skill in conducting the administration affairs of the schools.

During the past eleven years the enrollment has grown from 8,000 to 16,000; the number of teachers from 175 to 455; the cost from \$125,000 to \$625,000. Eleven years ago there were less than 700 enrolled in the high schools of the city, this year there are 2,300 and the number is increasing rapidly.

MINNEAPOLIS ELECTS WEBSTER.

What has been termed, by the Minneapolis press, as the most sensational chapter in the

school history of Minneapolis closed with the election as superintendent of schools of W. F. Webster with a contract running to August 1, 1925, at an annual salary of \$8,000.

The hasty departure of B. B. Jackson, early in the year, on charges of personal delinquencies, brought Mr. Webster, formerly a high school principal, into the acting superintendency. When the question of selecting a superintendent came before the school board, the first informal ballot gave W. F. Webster 3 votes, Joseph Jorgens, Principal, South High School, 3. William T. Harris, superintendent at Joplin, Mo., 1.

Mr. Webster became identified with the Minneapolis school system in 1893 when he was made principal of East High School. He held that position until 1916, when he was made assistant superintendent of schools under former Superintendent F. E. Spaulding.

Mr. Webster has announced that the outstanding feature of his program will be a business administration.

PERSONAL NEWS OF SUPERINTENDENTS.

—Mr. Richard J. Tighe, superintendent of schools at Muskogee, Okla., has been reelected for a term of two years, at an annual salary of \$5,000.

—W. A. Greeson was reappointed superintendent of the Grand Rapids, Mich., Schools for his seventeenth year of successive service.

—Mr. Ralph W. Westcott, superintendent of schools at Walpole, Mass., has gone into business with the firm of Bird & Son, New York and East Walpole. Mr. Westcott will have charge of the sales promotional work for Bird's Neponset rugs and floor covering.

—J. M. Snesrud, Superintendent of Schools at Ortonville, Minn., died suddenly in March and Mr. John E. Palmer, secretary of the board, was selected to act in his place for the balance of the school year.

—Supt. E. J. McNamara has been unanimously reelected at North Bend, Wash.

—Supt. John S. Clark of Waukegan, Ill., has been reelected at a salary of \$4,000.

—Supt. Frank S. Tisdale of Watertown, N. Y., has been reelected at an increased salary of \$3,900.

—Mr. E. E. Mitchell, of Herington, Kans., has been elected superintendent of schools at Great Bend.

—Mr. C. A. Norvell, of Cape Girardeau, Mo., has been elected at Chaffee.

—Mr. J. E. Jenner of Pontiac, Mich., has been elected superintendent of schools at Bay City, succeeding F. A. Gause. The appointment is for two years and carries a salary of \$6,000.

—Mr. E. D. Dean of Edgemont, S. D., has been elected superintendent of schools at Storm Lake, at a salary of \$2,700.

—Supt. W. E. Miller of Knoxville, Tenn., has been reelected for a three-year term.

—Mr. C. C. Wise has been elected superintendent of schools at Fruitland, Ida.

—Supt. R. T. Adams of Warren, Pa., has announced his retirement with the close of the school year.

—Supt. R. L. Harris of Columbia, Tenn., has been reelected for his fourteenth term.

—The salary of Supt. H. S. Fischer of Terryville, Conn., has been raised from \$2,800 to \$3,000 per year.

—Supt. S. T. Neveln of Austin, Minn., has been reelected for a three-year term, at a salary of \$4,500.

—Supt. Wm. C. Hobbs of Bristol, R. I., has been unanimously reelected at a salary of \$2,800.

—Mr. A. W. Fortune has resigned as superintendent of schools at Salamanca, N. Y. Mr. Fortune has been succeeded by Principal Place.

—Supt. G. R. White of Oswego, Kans., has been unanimously reelected at a salary of \$3,000.

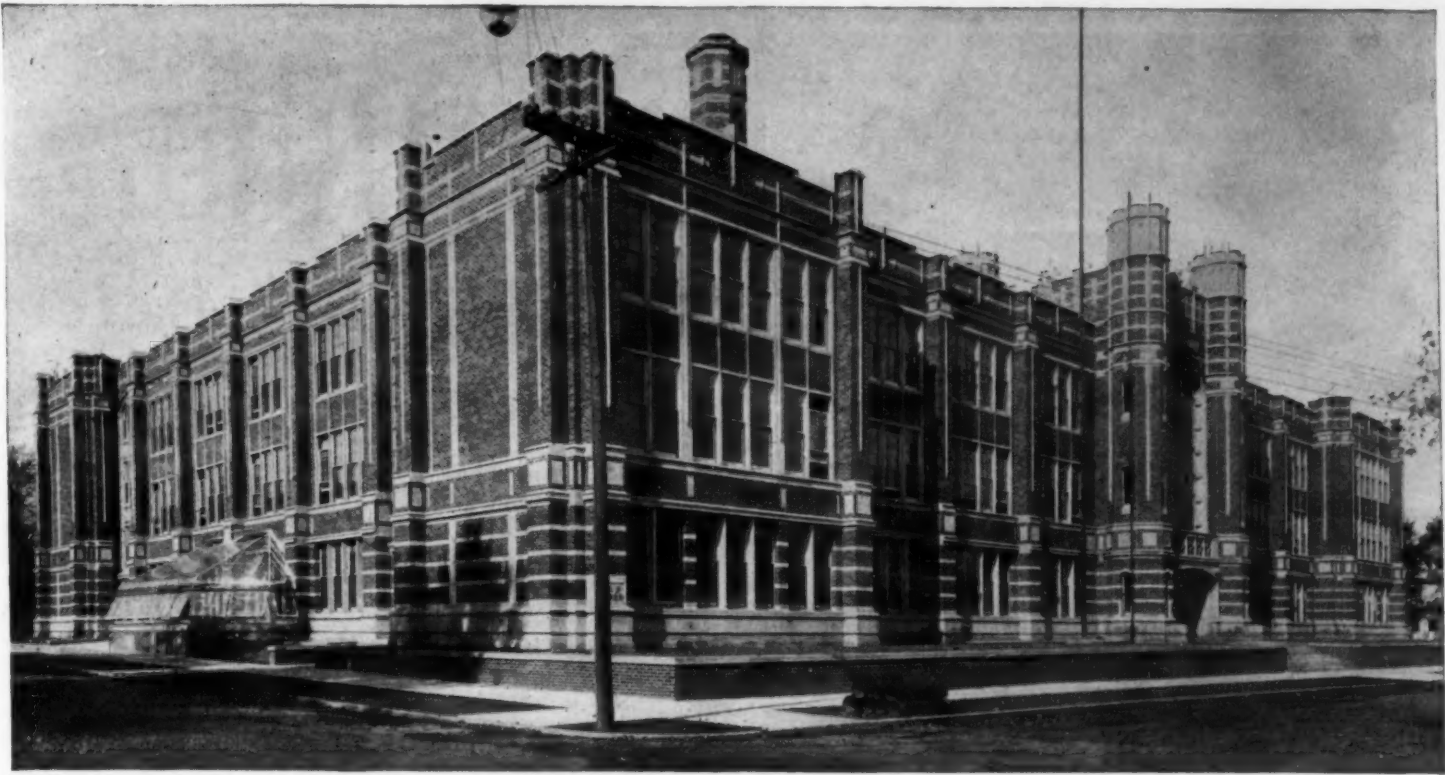
—Supt. S. W. Moore, of Bend, Ore., has announced his resignation, effective at the close of the school year.

—Supt. A. H. Dunn of Fort Collins, Colo., has been reelected for the next year.

—Supt. O. W. Herr of Red Wing, Minn., has been reelected at a salary of \$3,600.

—Mr. I. H. McIntyre of Muscatine, Ia., has been elected superintendent of schools at Green Bay, Wis.

—Mr. Wm. T. Clarke, superintendent of schools at Towanda, Pa., died of an attack of asthma at his home in that city. Mr. Clarke was elected superintendent in 1920 to succeed L. J. Russell deceased.



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J. P. ADAMSON & COMPANY
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Not better plumbing fixtures
because they are used by
7,836 schools — but used
by 7,836 schools because they
are better plumbing fixtures

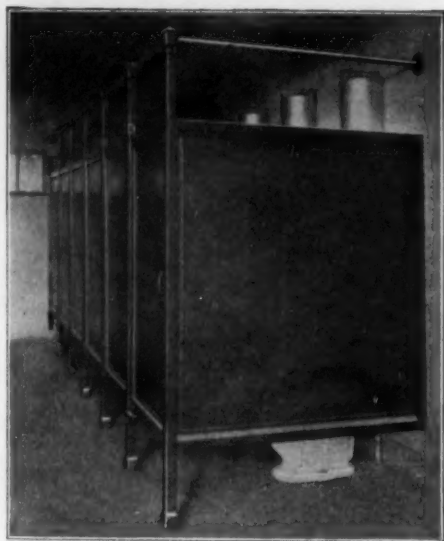
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Toilets in South Euclid School,
South Euclid, Ohio.

The Toilet Partitions Do Make a Difference

FIRST of all, toilet partitions in schools should be metal—the best material from the standpoint of cost, sanitation, and durability. Secondly, they should be *Sanymetal*—the pioneer among metal toilet partitions—the one preferred by school architects and school boards everywhere. See that genuine Sanymetal is specified *by name* for your schools.

Built in standard unit sections which fit any floor space or layout. Single or double doored or without doors. Easy to erect and permanently rigid when installed. Armco Iron and electro-zinc plating safeguard Sanymetal from rust. All doors equipped with Springless Sanymetal Gravity Roller Hinges. Our Catalog No. 2 shows all types of toilet, shower and urinal partitions.

THE SANYMETAL
PRODUCTS COMPANY
989 E. Sixty-fourth St., Cleveland, O.

Always
Built of



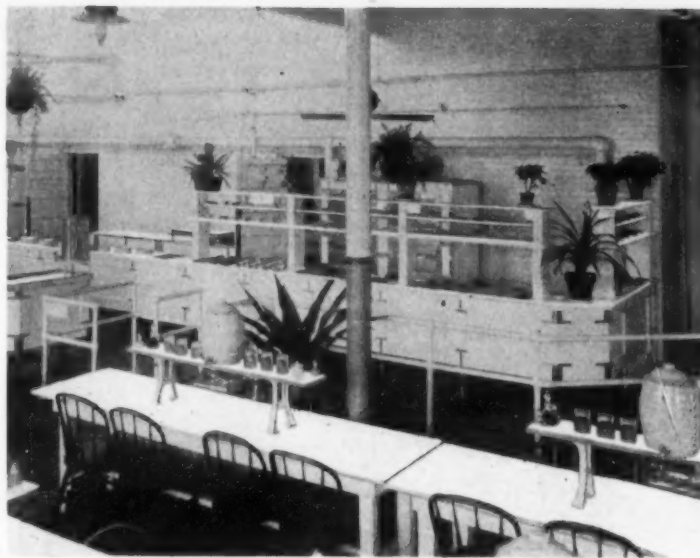
Rust-resisting
Iron

Sanymetal

TRADE MARK U. S. REG.

VITROLITE

Makes the Cafeteria *Sanitary and Inviting*



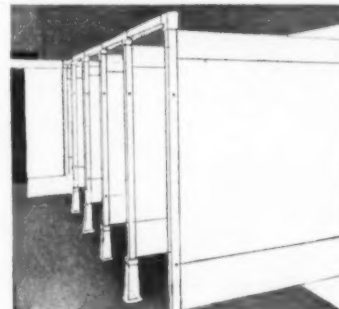
Strong, healthy bodies are conducive to active, creative brains. The food served in a school cafeteria is intended to give the nourishment which results in health promotion and maintenance.

The school cafeteria should be the cleanest, brightest spot in the institution. Food eaten in dark, gloomy, unsanitary quarters loses a great deal of its beneficial effects.

A school lunch room or cafeteria equipped with tables and counters topped with *Vitrolite* is always inviting, and is easily kept in a perfectly sanitary condition.

Vitrolite is pure white,—a substance far harder than marble—acid-proof and non-absorbent. The stroke of a damp cloth cleans it and makes it like new.

Vitrolite has no equal for partitions in school showers and toilets. Its smooth, hard surface is easily kept clean, and because of its high finish, cannot be written or marked on. Slabs for partition use are furnished in sizes of 30 x 84 and 36 x 84. Full particulars regarding VITROLITE for lunch room and construction purposes will be gladly furnished.



The Vitrolite Company
Chamber of Commerce Bldg. - Chicago

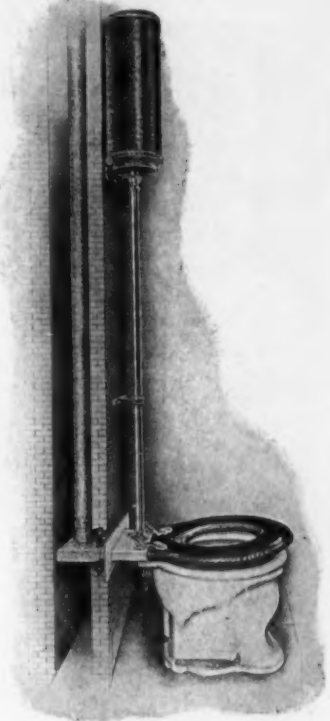
"NOKCO" PLUMBING FIXTURES

ARE
SIMPLE IN CONSTRUCTION
AND EFFICIENT IN OPERATION

They insure absolute satisfaction. **NOKCO** PLUMBING FIXTURES are the results of 45 years of experience in the manufacture of plumbing ware. They are the ideal plumbing fixtures for school use. Let us tell you why.



Look for the **NOKCO** trade mark, a symbol of quality, durability and entire satisfaction.



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School Law Notes

Schools and School Districts.

Under the Missouri revised statutes of 1919, § 11201, providing that, in changing the boundary lines between the two established school districts, one district shall not encroach on the other simply for the "acquisition of territory", a district could not add to its territory a portion of other district which was uninhabited by persons of school age, merely to obtain revenue from such territory, on the theory that it needed such revenue to properly conduct its schools and that revenue was not needed by the other district. —School Dist. No. 35 v. School Dist. No. 32, 235 S. W. 470, Mo. App.

School District Government.

Though the personnel of a board of education may change from time to time, such board is now, and has long been, a body politic and corporate with perpetual succession, and therefore a debt created by the board is a continuing obligation of the board, regardless of any change of its membership, and no question of assumption of indebtedness of an old board can arise. —Elliot County Fiscal Court v. Elliott County Board of Education, 234 S. W. 947, Ky.

School District Property.

An offer to give to a school district land for a schoolhouse site and an acceptance thereof by the school district, followed by undisputed occupancy for school purposes for more than 30 years, does not convey to the school district the right to give an oil and gas lease to a third person, so as to permit him to take from the land oil or gas for commercial purposes. —School Dist. No. 100, Wilson County v. Barnes, 202 P. 849, Kans.

Unless a school board has been limited by the vote of the people, it has the right to use its

own discretion as to the character of the building to be built, and in levy for building purposes, may levy sums in addition to the amount voted to pay for the building if such additional sums are required to build the character of building that it has determined the needs of the district demand. —People v. Scott, 133 N. E. 299 Ill.

Under the Kentucky supplementary statutes of 1918 § 4440, authorizing the county board of education to have schoolhouses and the furniture insured against fire or other casualties, it is necessarily implied that the power is bestowed upon such board to determine for itself against what casualties it will insure, and the amount of risks, the specific buildings and property that it will contract to be insured, the insurance corporation that it will contract with, and the details of that contract, in the absence of any other statute requiring certain contracts and a certain kind of insurer, and the courts cannot interfere in the absence of abuse or discretion. —Dalzell v. Bourbon County Board of Education, 235 S. W. 360, Ky.

Where a heating contractor's bond given a district obligated the surety to "repay the said school district all sums of money which they may pay to other persons on account of work and labor done or materials furnished on or for said buildings," the surety was liable to the district for amounts paid by the latter for material ordered by the contractor, and used in construction and installation of the heating system, though neither his contract with the district nor the bond obligated the contractor or surety to pay for the material used in the building. —School Dist. No. 37 in Butler County v. Aetna Accident & Liability Co., 234 S. W. 1017, Mo. App.

School District Taxation.

Since the objects of the Arizona laws of 1921, c.10, allowing interest on school warrants indorsed "no funds" at not to exceed eight per cent, were to effect a greater parity or right between creditors of school districts and county creditors generally, who are entitled to interest-bearing warrants on depleted funds, under the Arizona civil code of 1913, par. 2568, and to promote the public welfare by insuring the unin-

terrupted operation of the educational processes of the state, such chapter which fixes no specific rate of interest on school warrants, when construed with the latter section, which fixes a rate of six per cent on all warrants not paid for want of funds, requires that all school warrants bear interest at six per cent. —Coggins v. Ely, 202 P. 391, Ariz.

The validity of a tax levy is to be determined as of the time it is made, and not by events that happen thereafter to defeat the intention of the board that made the levy. —People v. Scott, 133 N. E. 299, Ill.

Where the resolution of a board of education of a school district recited that not less than the specified sum will be required to purchase a site and to construct a building, and where notice of election as to whether bonds for such amount should be issued for such purpose did not indicate that no more than such amount would be used for such purpose, the board could levy a tax to raise an additional amount to be expended for the site and the building, notwithstanding the estimate made by the board in the preamble of the resolution that no more than the amount of the bond issue would be required, since the district by voting for the bond issue did not limit the board in the purchase of a site and the construction of a building to the amount of such issue. —People v. Scott, 133 N. E. 299, Ill.

The validity of a tax levy by a school board of a consolidated district for funds wherewith to pay interest to fall due on proposed bonds, which has been approved by the district for building purposes, was not affected by subsequent litigation enjoining issuance of bonds, since it was the board's duty to make a levy sufficient to pay such interest, under the Illinois Constitution, art. 9 § 12, and since the validity of the levy was to be determined as of the time when it was made, not by events that happened thereafter to defeat the intention of the board. —People v. Scott, 133 N. E. 299, Ill.

SCHOOL LAW.

—A taxpayer of Minneapolis recently sought to enjoin the board of education from awarding a contract for electrical work in one of the school buildings to an outside contractor, where

OZONE PURE AIRIFIER



The power consumed by the apparatus is extremely small, being only about 120 watts maximum for a 25,000 cu. ft. (per minute) machine when operating on alternating current. Based on an energy cost of 10c per kw. hr., this would give a cost of 12c per 10-hour day.

The installation of the "Ozone Pure Airifier" in connection with Fan systems of heating and ventilation in schools, permits of re-circulation of a large percentage of the total air volume handled.

ADVANTAGES

Saving in Cost of Operation

- 1.—Reduction of 25 to 50% in coal consumption.
- 2.—Reduction in Steam Consumption.

Saving in Initial Cost of Mechanical Equipment

- 1.—Tempering coils may be omitted.
- 2.—Boiler capacity may be reduced.
- 3.—Size of steam and return pipes, valves, fittings and pumps may be reduced.

RESULTS

Pure air in rooms, free from organic odors and impurities.

We have much literature on the questions of ventilating and heating which we shall be glad to send to anyone on request.

Ozone Pure Airifier Company
1401 W. Jackson Blvd., Chicago, Ill.

it appeared that the repair department maintained by the board could do the work for \$3,000 less than the bid of the outside contractor. The court has denied the injunction, holding that the board in awarding such a contract, was exercising its administrative function. In the absence of fraud or bad faith, the court declared that decisions in such matters are not subject to review.

—A truck owned by the St. Louis, Mo., Board of Education injured a man, resulting in a \$35,000 damage suit. The lower court decided against the claimant. The supreme court affirmed the decision of the lower court, holding that the board is not liable for accidents caused by its agents or employees on the ground that it is not a corporation but a government agency.

—An interesting case dealing with the issuance of school bonds arose in Kentucky recently. A controversy ensued at Lexington on the issuance of \$400,000 in bonds. The question was centered upon the form of issuance, whether they should become an obligation of the city and be signed by the mayor and commissioner of finance, or whether they should be in a form showing them to be obligations of the board of education. The court of appeal decided that the bonds clearly became the obligation of the city and must be signed by the city officials after they have been voted affirmatively by the people and properly certificated by the board of education.

—An important precedent has been established by the New York City board of education through a ruling that an employee of the department of education is in the service of the state, rather than of the city. The occasion was a request by relatives of William Epstein, an employee of the board who died while in military service, for the amount of salary he would have earned had he lived until the end of the year 1918. According to the ruling of the board of estimate and apportionment, the employee in question was not an officer or employee of the city of New York.

HYGIENE AND SANITATION.

—The United States Public Health Service, in a recent circular, calls attention to the fact that backward children are not always, perhaps

not often backward because of mental deficiency or slothfulness. Many of them are backward solely because of such ordinary and easily remediable defects as adenoids, near-sightedness, or bad teeth.

A case in point was recently reported by the official representative of the Public Health Service in the eighth sanitary district of Vermont, in which the Service cooperated in a rural health work project.

Medical inspection in one of the schools in October, 1919, showed that it had been thought necessary to instruct in a special room sixteen pupils who had seemed to be unable to keep up with their classes. Physical examination revealed that each of the sixteen pupils had some hampering physical defect which was the probable cause of their inability to keep up with their classes.

On re-examination of the pupils in December, 1920, all of the sixteen had caught up with their grades and were keeping up with their classmates. A year later, in December, 1921, some of the sixteen were among the leaders in their grades.

—Mt. Kisco, N. Y. Hot cocoa or soup is being served regularly in the schools. Of seven hundred pupils, more than two hundred bring their lunches during the winter months. At least sixty pupils avail themselves of a hot dish at the price of five cents. The lunch system is self-supporting and the only cost to the board has been an outlay of \$100 for equipment.

—Concord, Mass. Through a dental clinic maintained by the Middlesex County Farm Bureau, many Concord children have had much-needed dental work done at a nominal cost. The service has been practically self-sustaining; at least, there has been no expense to the town. It has been a service very much worth while as a preventive of loss of pupils' time due to poor health directly caused by poor teeth. A similar service should be continued, and probably can be, at a relatively small cost.

ANNUAL MEETING OF SCHOOL BUSINESS OFFICIALS.

The National Association of Public School Business Officials will hold its annual meeting May 16-19, at Atlantic City, N. J. President

Arthur Kinkade, Decatur, Ill., will preside at the sessions.

At the first session on Tuesday morning, Mr. Wm. T. Keough, Boston, Mass., will give an address on "School Board Organization and Business Administration in the Larger Cities." There will also be the usual reading of communications, the presentation of the treasurer's report, and announcements and appointment of committees.

At the second session on Tuesday afternoon, Mr. Herbert N. Morse, Trenton, N. J., will discuss "An Effective State School Board Federation"; Commissioner of Education John J. Tigert, Washington, D. C., will talk on "The Relation of Adequate Funds to Good Schools"; and Mr. J. G. Stearley, Oklahoma City, Okla., will explain "The Function of the School Business Manager in the Small City."

At the third session on Wednesday morning Mr. G. W. Grill, Lakewood, O., will deliver an address on "Internal School Accounting"; Mr. Wm. T. Keough will give the report of the special school accounting committee appointed to assist in the development of uniform report forms for large cities; Mr. Paul H. Scholz, San Antonio, Tex., will discuss "Method of Financing Current Expenses," while Mr. H. R. Bonner, U. S. Bureau of Education, Washington, D. C., will take for his subject "Determining Per Capita Costs."

On Thursday morning Mr. N. L. Engelhardt, Teachers College, Columbia University, will discuss "Modern Schoolhouse Requirements." There will be a round-table discussion on the whole problem of schoolhouse planning and construction.

On Thursday afternoon Mr. R. M. Milligan, St. Louis, Mo., will give a talk on "The Value of Ozone in Schoolhouse Ventilation" and Mr. Geo. F. Womrath, Minneapolis, Minn., will discuss "The Janitor-Engineer Problem." There will be a miscellaneous round-table or question box.

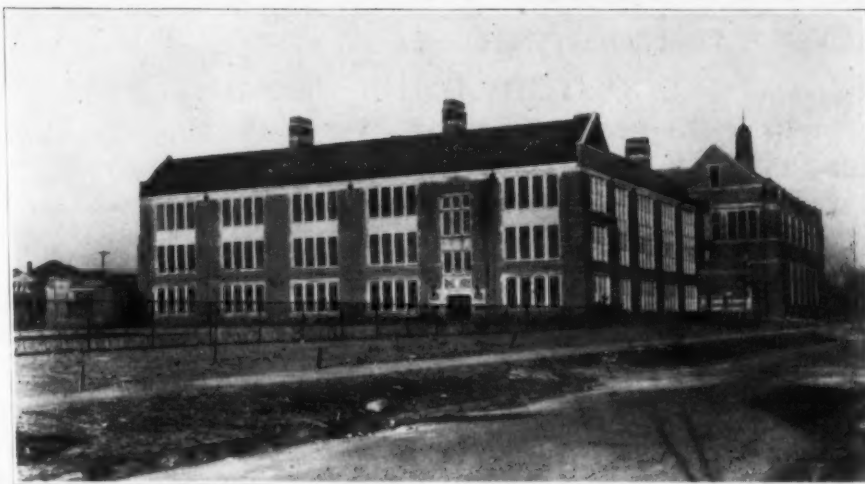
On Friday morning will occur the annual business meeting of the association. There will be the usual reading of communications, with reports of the committees on constitution and by-laws, resolutions, and nominations.

The DUNHAM

REG. TRADE-MARK

HEATING SERVICE

Three
of Detroit's
New Grade
Schools which



Levi T. Barbour Intermediate School

Embody
the Detroit
Educational
Policy



Hutchins School



Pattengil School

Educational Policy

1. That the educational needs of children of the kindergarten and the first six grades be met by building large elementary schools with auditoriums and gymnasiums planned definitely to satisfy the requirements of the "platoon" or "duplicate form of organization."

2. That all pupils of the seventh, eighth and ninth grades be provided for in large intermediate schools built to house at least 1,200 pupils and equipped to care for the needs of three groups of pupils:

- (a) Those who are certain to leave school as soon as the compulsory school law will permit.
- (b) Those who are certain to continue their studies in the high school;
- (c) Those whose future in school is uncertain.

3. That children of grades ten, eleven and twelve be provided for in cosmopolitan high schools, equipped to meet the physical, social, intellectual and vocational needs of various types of pupils.

Delegations from all parts of the country are visiting Detroit, inspecting school buildings, and informing themselves about the new educational policy. In a nut shell, the policy is designed to keep round pegs out of square holes during school years, and to give to the world in those children who leave school at an early age, better equipped boys and girls to meet the issues of life, than is possible under the old elementary school plan.

The school buildings shown here are each of them equipped with a Dunham Heating System, as are many other schools in the city.

The Dunham equipment of these three buildings is given in the box to the right of this paragraph. General information is as follows: "The boilers operate under 40 lbs. steam pressure. The system is what is known as a split system. Rooms are kept up to temperature with direct radiation and Vento supplies air for ventilation at the required temperature. The job is handled by Vacuum Pumps during the day, and by pumps electrically driven at night."

We shall be glad to send suitable bulletins concerning Dunham Heating Systems to any one interested, who will refer to this advertisement and address their inquiry to

C. A. Dunham Company
230 East Ohio Street
Chicago

52 Branch and Local Sales Offices in United States and Canada

Dunham Equipment

BARBOUR SCHOOL:
Dunham Vacuum Heating System, 364 Dunham Traps. Archts., Malcolmson, Higginbotham & Palmer. Engrs., McColl & Snyder & McClean. Htg. Contrs., Drake-Avery Co.

HUTCHINS SCHOOL:
Dunham Vacuum Heating System, 321 Dunham Traps. Archts., Malcolmson, Higginbotham & Palmer. Engrs., McColl, Snyder & McLean. Htg. Contrs., Drake-Avery Co.

PATTENGIL SCHOOL:
Dunham Vacuum Heating System, Archts., Malcolmson, Higginbotham & Palmer, Engrs., Ammerman & McColl. Htg. Contrs., Irvine & Miller.

THE BRUNSWICK-BALKE-COLLENDER CO.
WHALE-BONE-ITE
 CLOSET SEATS

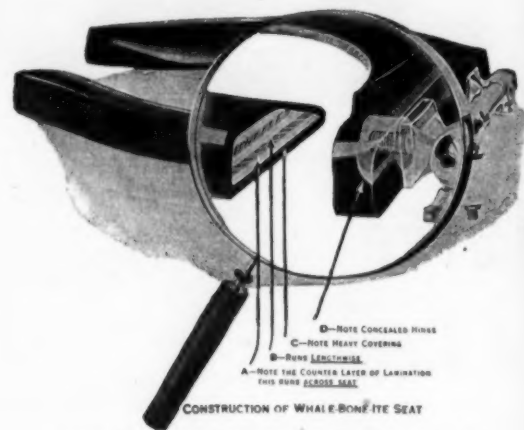
You build for permanency so why install toilet seats that are subject to deterioration from moisture and urine. You eliminate wood from toilet room construction, but you overlook the seat which is of greater importance, in that it comes into CONTACT with the person. Wood baseboards or partitions only created unhealthy atmosphere, because it absorbed moisture and needed repainting and repairing, which you overcame with non-porous materials, slate, marble, etc.

WHALE - BONE - ITE toilet seats are made of an IMPERVIOUS, acid-proof composition that has proven in years of service to be only material for the requirement, giving lifelong sanitary service.

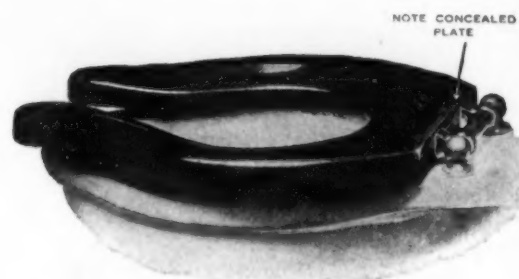
Your school bespeaks the progress of the community, so why use the same materials your forefathers did, instead of keeping up with the progress of up-to-date education?

Sold by all leading plumbers and jobbers.

If you cannot secure locally, ask Seat Department of makers.



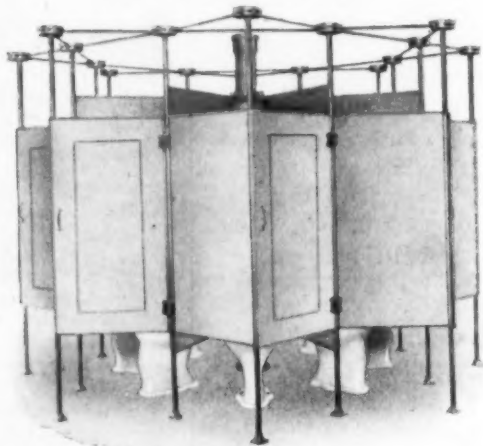
NOTE CONSTRUCTION CUT OF THE POPULAR
 DESIGN No. 23-9



CUT SHOWS SEAT No. 21-9

THE BRUNSWICK-BALKE-COLLENDER CO.
 1623 S. WABASH AVE. CHICAGO

The Kelly Octopus Water Closet Combination For Schools

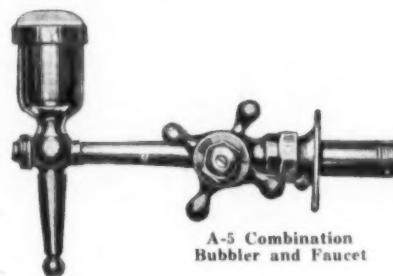


8 Water Closets in small space.
 Stands out free from Walls.
 Does not intercept Light or Air.
 Can be installed in Half the Space, in Half the Time,
 and at Half the Cost of others.
 The large Octopus One Piece Drainage Fitting, not
 shown, is included with each Combination.
 Hundreds in use.

Details on request.

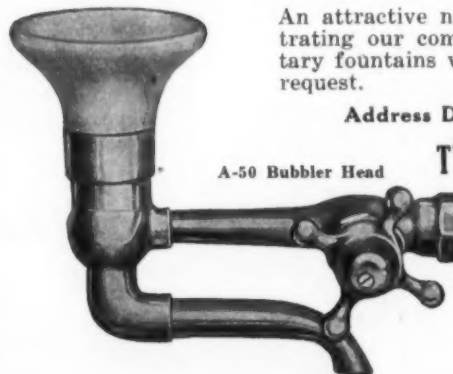
THOS. KELLY AND BROS.
 404 SOUTH KOLMAR AVE.
 CHICAGO, ILLINOIS.

An Investment
 In Good Health



Twentieth Century Drinking Fountains

SANITARY drinking conditions are absolutely necessary in every school that attempts to safeguard the health of children and grown-ups. Twentieth Century Sanitary Drinking Fountains combine perfect sanitation with marked durability and agreeable economy. There is a Twentieth Century Fountain designed to meet **your** requirements.



An attractive new catalogue illustrating our complete line of sanitary fountains will be mailed upon request.

Address Department B

**TWENTIETH CENTURY
 BRASS WORKS**
 BELLEVILLE, ILLINOIS.

EVERY DETAIL IS A FEATURE

WEISTEEL Compartments can be installed in either new or old buildings with equal facility. Only three bolts are required to erect—no drilling or fitting of any kind. A feature of special merit is the wall connection, which allows for variation in walls and permits setting partitions out a distance of one inch from wall.

WEISTEEL Compartments have no unnecessary joints, no projecting screw or bolt heads or other dust and dirt "catchers." Every sanitary requirement has been fully taken care of in their simple design and construction. They are furnished in either olive green or light gray, as desired.

IN WEISTEEL Compartments

Let us furnish specifications and prices on equipping your building. This service places you under no obligation. Booklet of full information sent on request.

HENRY WEIS MANUFACTURING COMPANY

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New York, N. Y., 110 W. 34th St.
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Denver, Colo., Geo. W. Summers & Co., 401 Jacobsen Bldg.
Helena, Mont., Mr. Raymond C. Grant.

Omaha, Nebr., Mr. J. T. Kelley, Farnam Bldg.
Dallas, Tex., Gilbert Mfg. Co., 1209½ Main St.
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Greenville, S. C., Mr. J. Mac. Rabb, News Bldg.
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WEISTEEL Compartments (of rigid steel construction), for Toilet, Shower and Dressing Rooms have many exclusive construction features, which combined with their unquestioned utility and low cost make them the most popular, efficient and economical for school use. Many of the largest institutions throughout the country have been equipped exclusively with Weisteel Compartments because of their permanence—economy—satisfaction—sanitation and pleasing appearance. The cost of WEISTEEL Compartments is exceptionally low—and the first cost is the only cost.

Atchison, Kansas

Toronto, Can., Porcelain Products, Ltd., 34 Adelaide St. W.
Toledo, O., Building Products Co., Summit and Sandusky Sts.
Detroit, Mich., Detroit Fire Door Co., Dime Bank Bldg.
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Upper Darby High School, Lansdowne, Pa.



Liberal Arts School, Phoenix, Ariz.
Lescher, Libbey & Mahoney, Architects.

Teachers' Salaries

SOUTH ST. PAUL SALARY SCHEDULE.

—The school board of South St. Paul, Minn., has seen its way clear to keep the salary schedule adopted in 1921 in operation for the year 1922-1923. This is a sane, constructive policy in a year when there is agitation for reductions in teachers' salaries in certain quarters. The schedule provides for annual increases of \$75, with the exception of certain cases recommended by the superintendent. The schedule is as follows:

Grade Teachers.

First year, without experience, \$1200; first year, with one year's experience, \$1250; first year, with two years' experience, \$1300; first year, with three years' experience, \$1350; first year, with four years or more experience, \$1400. Maximum, \$1,750.

High School Teachers.

First year, without experience, \$1450; first year, with one year's experience, \$1500; first year, with two years' experience, \$1550; first year, with three years' experience, \$1,600; first year, with four years or more experience, \$1,650. Maximum, \$2,250.

An allowance of \$10 per month will be paid to heads of departments and assistant principals.

FORT SMITH SALARY SCHEDULE.

The school board of Fort Smith, Ark., has adopted a salary schedule which goes into effect in September, 1922. Under the schedule, teachers are classified on the basis of academic and professional training as follows:

Class I, teachers with a master's degree or equivalent; Class II, those with a bachelor's degree; Class III, those with a normal diploma, and Class IV, teachers with less than a normal

school training. The salaries for these groups are:

	Minimum	Modal Increments	Maximum
Class I	\$1,600	10 x 100	\$2,600
Class II	1,400	10 x 100	2,400
Class III	1,000	5 x 100	1,500
Class IV	800	5 x 100	1,300

Under the plan, each teacher is assigned a classification at the time of employment. The schedule for each class applies thereafter until the maximum is reached, subject to reservations. Teachers will be considered as belonging to a lower classification until the next higher classification has been reached. Approved experience in other school systems is recognized at the time of employment.

Applicants whose preparation, either professional or academic does not equal or exceed that of Class III will not be eligible for appointment after the adoption of the schedule. Teachers now employed whose preparation, either professional or academic, does not equal that of Class III will be expected to qualify.

Salary increases will be given only when earned and will not be regarded as automatic with increasing tenure. Classroom effectiveness and professional progress are the factors to be considered in giving a full or partial increment. Failure to earn a full increment in any year does not operate to reduce the maximum attainable under any classification.

The provisions of the schedule are intended to apply to all grades. Teachers with equivalent training and experience will receive equal salaries whether they teach in the elementary or secondary schools. Teachers with superior training are expected to maintain a higher degree of classroom effectiveness than is expected of teachers with inferior training. Unless additional training produces better classroom results salary recognition for such additional training is not justifiable.

Salaries will be paid on a ten-month basis at the close of each calendar month and the schedule is based upon a school year of 36 weeks. Teachers who resign during the school year forfeit all salary for the month of June.

Teachers new to the system are on probation for a period of two years. Thereafter a teacher who is rated "C" or better may expect annual reappointment so long as the other provisions of the schedule and the rules are complied with.

The schedule is not intended to reduce the salary of any teacher now employed. Those who are now receiving as much or more than they would receive under the schedule will not be eligible for an increase in salary until the requirements have been fulfilled. For each step in rating above or below the modal rating there will be an increase or a decrease in the salary increment of \$25.

Teachers' Salary Notes.

—The mayor of Newburyport, Mass., recently scored the teachers of the city, claiming that "they spent more time scheming for salary increases than they do in promoting the efficiency of the schools."

—Frank L. Pinet, Secretary of the Kansas State Teachers' Association, states the school boards of the state are a unit in maintaining the present scale of teachers' salaries this year.

—The school board of the District of Columbia has deferred the raise of teachers' salaries owing to financial reasons.

—The Spokane County (Washington) School Directors' Association has authorized the appointment of a commission that shall make a study of the teachers' salary question for the purpose of aiding school boards to apportion salaries according to ability, efficiency and experience of teachers.

—The teachers of the centralized school of Alfordton township, Ohio, are behind three months in their salaries. On March 15th they received the salary due them in December.

—The question of reducing the salaries of the Bristol, Conn., teachers is to be considered by a joint meeting of the common council and the school board. It is believed that the present economy plan advanced by city officials will make the cut necessary.

—The proposal on the part of the city council of Leominster, Mass., to cut the salaries of teachers is opposed by Superintendent William H. Perry.

THE TRUTH ABOUT DRINKING FOUNTAINS



UNSAFE
Vertical Stream Bubbler
Condemned Everywhere



UNSAFE
Camouflaged
Vertical Stream



IMPRACTICAL
Rainbow stream Hose-like.
difficult to drink from.

No. 1 shows the vertical stream which permits saliva and waste water from the drinker's mouth to fall back to the source of supply. No longer considered sanitary.

No. 2 is a slight modification of vertical stream type. This slight angle is little if any improvement over No. 1.

No. 3 is more sanitary if properly used. However, stream is hose-like with no definite drinking point. Drinker places mouth as near water outlet as possible; result, *unsanitary* like No. 1 and 2.

WRITE
TODAY
FOR
CATALOG!

Puritan
CANTONMENT
DRINKING
FOUNTAINS

See that Puritan
Fountains are
specified for
Your Schools

THE HALSEY W. TAYLOR CO. Warren, Ohio
LARGEST Exclusive Manufacturers of Drinking Equipment

THE PERFECT DRINKING FOUNTAIN STREAM

is produced by the famous PURITAN Cantonment "2-stream projector." This stream producing device was designed for, approved and adopted by the Government during the war. Now recognized as superior by the largest interests and schools in the country.

Practical drinking mound is formed by mechanical means. An interference is set up in the stream which retards the movement of the water at the apex of the arc. This forms a localized drinking mound, while the formation of the stream makes it impractical to drink from any other point.



"Cantonment
2-Stream Projector"

"The teachers would not be the ultimate losers in the deal if the reduction is enforced," said Dr. Perry, "for some of our best teachers will leave us to accept better positions elsewhere. Those who do remain will have an unpleasant attitude toward the city in general and the dissatisfaction of a teacher would ruin the chances of the desired instruction."

—For two years there has been a contention between the Detroit school board and the city officials on the question of paying the teachers a bonus for remaining with the schools during the war period, the former in favor and the latter opposed. An injunction suit has now been filed, and the contention is made that the board had no right to grant compensation not specified for in the contracts with the city.

—The school board of Schuyler, Nebr., has effected economies by reducing the salaries of superintendent and teachers. The cuts average from \$50 to \$100 per person.

—The Commissioners of the District of Columbia are opposed to any increase at present in the salaries of the Washington teachers.

—The school board of Ironwood, Mich., has definitely decided that a cut in teachers' salaries must be made.

—The teachers of Oklahoma are told by The Oklahoma Teacher that there is a strong pressure on the school boards of the state to lower salaries. The publication advises teachers not to change positions because vacancies afford the entering wedge for salary reductions. The slogan advanced reads: Don't rock the boat.

—The school board of Springfield, Mass., provided early in 1921 an increasing salary schedule which the mayor refused to sanction. The matter has reached the supreme court of the state. In the meantime legislative relief is sought whereby an increase of five per cent each year is added to the salary budget. The question now threatens to become a political issue at the next local election.

—Associations of teachers are working toward the introduction of the sabbatical year for New York City school teachers, according to Frederick B. Graham, chairman of the teachers' interest committee. A number of local teachers' associations are cooperating in the movement. The plan is to work together, so

as to settle on a definite policy, and then to submit the matter to the board of education.

—The New York City board of education has recently initiated legislation which is intended to exempt teachers from taking the loyalty oath required under the law governing state employees. The change seeks to prevent an overlapping of the state law and the education law, which requires every teacher in the schools to sign two loyalty oaths.

—Duluth, Minn. A special committee of the board has prepared a set of regulations which are intended to apply to contracts entered into by teachers on or before September, 1922. Under these regulations the minimum salaries of teachers will be based on credentials and not on the basis of school assignment. The schedule provides for the following:

Two-year graduates, minimum \$1,000-1,200 and maximum \$1,800; three-year college graduates, minimum \$1,200 and maximum \$1,875; four-year graduates, minimum \$1,400 and maximum \$2,400; high school department heads, minimum \$1,500 and maximum \$2,500.

It is understood that only such educational qualifications will be credited as can be fairly estimated to fit the teacher for the type of work she is to do. In every case the extent, character and quality of education will be subject to determination by the board.

Graduates of the two-year course will receive annual advances for teaching experience up to and including the third year after graduation. Thereafter such person will receive an annual advance only when she shall have pursued the requisite amount of summer school work at an approved institution, at least every third summer. College graduates may receive annual advances for teaching experience up to and including the fourth year after graduation. Thereafter such person will receive an annual advance only when she shall have pursued the requisite amount of summer school work at an approved institution, at least every fourth summer. The above annual advances apply only to the maximum salaries.

The board is to be judge as to the amount of credit which any individual may be granted by the university extension or similar work in lieu of summer school attendance, provided that cor-

respondence courses shall not be credited, and provided further that no credit for advance shall be given until the amount of work equivalent to the standard summer session shall have been completed.

The annual advance which any teacher may receive will be \$75. A teacher now on the staff receiving \$1,650 or more may not receive an annual advance unless she has attended a summer session within the past three years and has not already received an advance because of such attendance, provided an advance may be granted to such teacher for next year, if she meets the requirements for summer school attendance during the summer of 1922.

—Muskegon, Mich. The board has voted to maintain the rate of increase in teachers' salaries adopted two years ago. The arrangement gives practically the entire teaching staff a substantial increase.

—New Britain, Conn. The school board is opposing reductions in teachers' salaries proposed by the municipal government. The members hold that they have a right to conduct school affairs in their own way and resent the interference of the city in their rights and duties. The members hold that to deduct ten per cent from the salaries would cripple the teaching staff and make the whole system inefficient. The board voted to keep the salaries at the present rate.

Scottsbluff, Neb. The board has adopted a new salary schedule under which new teachers will be paid a lower salary than has been the case in the past. Grade teachers will start at \$1,050 and will be increased \$75 a year until the maximum of \$1,200 is reached. Junior high school teachers have been reduced from \$1,450 to \$1,350 for the maximum salary. High school teachers will begin at \$1,350 and will be given increases of \$100 until the maximum of \$1,650 is reached. The new schedule represents a saving of over \$6,000.

—Billings, Mont. A reduction of \$150 a year in the salary of each member of the teaching staff has been adopted by the board. The reductions are effective during the next school year. Further savings will be effected with the elimination of the wood working department.

(Continued on Page 117)

(SONNEBORN PRODUCTS)

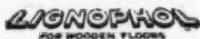
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Cemcoat

the sanitary, light-reflecting wall coating for halls, toilets and recreation rooms. Gloss finish. Easily kept clean of dirt and ink spots, washing with soap and water does not affect Cemcoat. White or colors.

SONOTINT

especially adapted for classrooms because its velvety finish reflects light without glare. Washable — easy to keep clean from dirt and hand spots.



the modern hardener gives new life to old or new wooden floors. It prevents splintering, wear and dusting, and gives a smooth, sanitary and decorative surface.

Write for full information
and testimonials from schools

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TRADE MARK

Makes Concrete Floors Dustproof and Wearproof

Dustless Concrete Floors!

Every concrete floor in your school building is a probable source of concrete dust.

This sharp, hard silicate harms clothing, desks and even the lungs of the pupils.

Lapidolith will make old or new concrete floors granite hard and therefore, dustless.

Just flush it on!

Lapidolith is a liquid chemical and it acts at once, completing the hydration of the cement and filling the pores with a crystalline material.

This treatment makes floors in the toilet rooms non-absorbent, and so easily washed and odorless.

Leading colleges and schools use Lapidolith.
200,000,000 square feet of Lapidolized floors in use.
Write for their testimonials, also free sample and literature. Dept. 22.

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Also manufacturers of Cemcoat, the washable wallcoating for schools



THE ultimate cost of Wolff Plumbing is always less than that of cheaper ware.

As the public has swung back to quality and begun to buy with more discrimination, Wolff specifications are showing a tremendous steady increase.

In new building and remodeling, discriminating architects and school boards will this spring specify thousands of this famous Wolff unit, whose quality, correct design and durability have stood the test.

Wolff "Solidon" siphon wash closet—adapted and made especially for school installations.

Seat operating — trouble proof. Of extra heavy construction with open front seat, rolled galvanized pressure tank and nickel plated finish.



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SANITARY ENAMELWARE, RANGE BOILERS,
POTTERYWARE, BRASS GOODS, MARBLE

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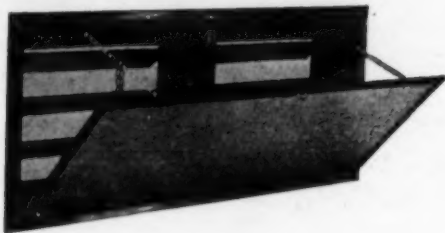
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The AUTOMATIC VENTILATOR

~ makes your room breathe!

THE LOGICAL VENTILATOR FOR SCHOOLS

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THE MODERN VENTILATING SYSTEM

NOISELESS — PRACTICAL — INEXPENSIVE

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TERRITORY AVAILABLE TO RESPONSIBLE SALES ORGANIZATIONS.

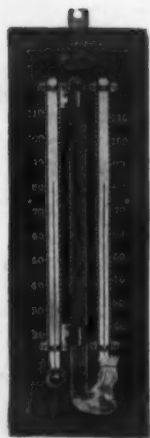
A SAFETY GUIDE

The Red Light on motor vehicles warns those in the rear of the proper distance for safety—prevents accidents.

A Thermometer is the Red Light of Safety in the Class Room. Its use is imperative. Thermometers indicate the proper temperature for health and mental efficiency.

Keen mental work is impossible in ill-regulated temperatures. Every degree above sixty-eight results in a corresponding drop in class room work.

A constant disregard of proper temperature not only results in mental torpidity but menaces health.



WILDER

Thermometers
and
Hygrometers

ARE ACCURATE SAFETY GUIDES

School Supply Houses act as distributors. They also have WILDER STANDARD COOKING THERMOMETERS for Domestic Science Classes. If you have difficulty in obtaining them write us direct for samples and prices.

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Makers of Thermometers for every purpose

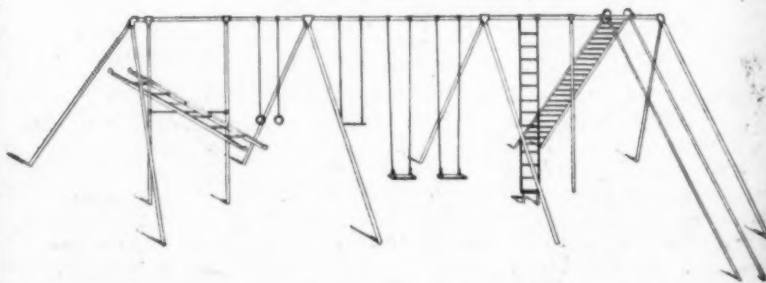
SCHOOL PLAYGROUND EQUIPMENT



THE CHICAGO LINE

GYMNASIUM APPARATUS ATHLETIC SUPPLIES

ONE OF OUR PLAY OUTFITS



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HUNDREDS OF SCHOOL BUILDINGS

In Almost Every State in the Union are Benefited by
the Saving in Fuel Resulting From the Installation of
Diamond Metal Weather Strip and Calking Compound

HERE'S ONE OF HUNDREDS OF LETTERS ON FILE

85 TONS OF COAL SAVED IN ONE YEAR

SAVES FUEL

Dear Sir:

Ames, Iowa, April 4th, 1918.

In regard to the weather stripping and calking that you did on our high school building last year, can say that they have proven very satisfactory. They not only enable me to heat the rooms more evenly, but have enabled me to save fuel, as we have burned 85 tons less up to April 1st than we burned to the same date last year.

This saving is largely due to the weather stripping and calking, though other factors entered into the saving. I hope the school board will have more of the same work done this year.

Respectfully,

J. H. ZENTMIRE, Engineer.

Ames, Iowa.

ADDS TO COMFORT

CONTRACTS TAKEN ANYWHERE—ANYTIME—ANYPLACE

LET US GIVE YOU AN ESTIMATE

THE DIAMOND METAL WEATHER STRIP CO.

HOME OFFICE AND FACTORY
COLUMBUS, OHIO



WESTERN FACTORY BRANCH
FORT DODGE, IOWA

ment, the sewing department, and the position of art supervisor.

—Spokane, Wash. The board has agreed to continue the present salary schedule which is based upon preparation for teaching work. The minimum for elementary teachers is \$1,200 and that for high school instructors is \$1,500. The maximum in all cases depends upon the experience and general preparation of the teacher.

—Supt. Roy Bowers of Bristol, Va., recently submitted to the board a table showing a comparative study of teachers' salaries and tax rates for the past year. The table is as follows:

Junior high school teachers in Bristol are paid \$1,025, while in cities of 10,000 to 25,000 population they are paid \$1,450 and in cities from 2,500 to 10,000 they receive \$1,290.

Elementary teachers in Bristol receive \$857, while in cities of 10,000 to 25,000 they receive \$1,241 and in cities from 2,500 to 10,000 they receive \$1,090.

Per cent all funds in teachers' salaries in Bristol 73 per cent, while in the United States as a whole it is 62 per cent.

—Supt. David Gibbs of Meriden, Conn., opposes reductions in teachers' salaries to a pre-war basis because of the loss of the better teachers to nearby towns which pay more. High school teachers' salaries range from \$140 to \$355 a month and grade teachers from \$100 to \$200 a month.

—Philadelphia, Pa. The finance committee has approved a plan to advance one-half of September's salary not to exceed \$50 to teachers with the opening of the new school year. The action was taken to remedy a situation making it necessary for teachers to wait until October for their first fall salary.

—The school board of Westfield, Mass., has adopted a policy making the principalships of the grammar schools attractive to men principals and has accordingly arranged the salaries to that end. A new schedule provides that the salary of supervising principals in grammar schools shall be \$2,500; that for the principals of primary and intermediate schools \$2,200, and that for teaching principals \$1,800.

TEACHERS AND ADMINISTRATION.

—A suit to test the validity of the teachers' pension law of Indiana has recently been entered in the Circuit Court of St. Joseph County, Indiana, by George E. Roop, an instructor in the South Bend high school. The suit is the first of the kind in the state and is the result of great dissatisfaction among teachers with the amended provisions of the teachers' pension fund law. The original law was enacted in 1915 and provided that teachers who took advantage of the provisions should make regular payments into the fund. By an amendment enacted in 1921, the amount of the payments was increased and the benefits reduced. A number of teachers have already come under the provisions of the law and their assessments have been increased by the last legislature.

Mr. Roop contends that under the law of 1915 he received eleven years' credit for last service on payment of \$110. Now that the amendment is in force, the South Bend authorities, unless enjoined, will make deductions from his salary on the basis of 1921 amendments. He seeks to prevent this and to have the 1915 law continued in effect.

—New York, N. Y. The board of education at a recent meeting criticized lobbying teachers who make frequent trips to the state capitol when the legislature is in session. Some of the members felt that the teachers had no right to a leave of absence to attend legislative sessions.

—Supt. W. J. Harper of North Providence, R. I., has made a plea for a raise in the schedule of salaries. He points out that an increase is necessary to prevent the closing of the schools or the acceptance of teachers of a lower grade. More than this, he says, the schools may lose the professional and able workers in the system unless higher salaries are paid.

—A teachers' retirement fund association has been organized at the Ball High School, Galveston, Tex., by members of the Galveston faculty. A fund is to be raised to form the nucleus of a pension fund to care for deserving teachers who have faithfully served the public schools, and who, because of age or illness, may be re-

tired. It is hoped to secure funds through membership dues, entertainments, bequests and donation that the association may function and so be able to aid some teacher who deserves aid.

—A course for teachers in the use of scientific tests has been inaugurated at Hagerstown, Md. A director has been employed to assist teachers in giving the tests in silent reading and to instruct the teachers in after-school conferences.

The purpose of the tests is to determine the value of textbooks, classes and whether the pupil gets the proper results from the printed page.

—South St. Paul, Minn. The grade teachers have begun a study of pupils as individuals. They make a study of the physical condition, home environment, social relations, mental abilities and habits of their children with unusual care. The result has been increased interest in school work and a more careful promotion of children.

The promotion figures at the close of the first semester, January 20, 1922, were as follows: 1066 pupils, or 80 per cent promoted; 188 pupils, or fourteen per cent retained; 73, or six per cent doubly promoted. This does not include the kindergarten enrollment, nor that of an outlying building where mid-year promotions are not given.

Special care is taken to see that every child doubly promoted gets special help in any units omitted that he will need. Each pupil may attend a class missed until he understands the principles involved. The teachers are permitted to make arrangements for giving outside help.

ANOTHER CHICAGO SCHOOL EXPLOSION.

The board of education of Chicago is now being charged with "reckless, extravagant and useless expenditures" for incidentals by the Chicago Teachers' Federation.

At a mass meeting of teachers and in pamphlets issued, the statement is made that the legislature had voted a sixty per cent increase in the educational fund amounting to \$13,400,000, which contemplated a salary increase of \$3,255,300. This would have added \$500 to the 4,650 teachers who have reached their present maximum and \$300 each to the other 3,101

Charter Oak School Room Heater

PERMANENT AS THE BUILDING ITSELF

A Sanitary, Heating and Ventilating Furnace for Schools

EASY TO INSTALL

Anybody handy with tools can do it.

POWERFUL HEATER

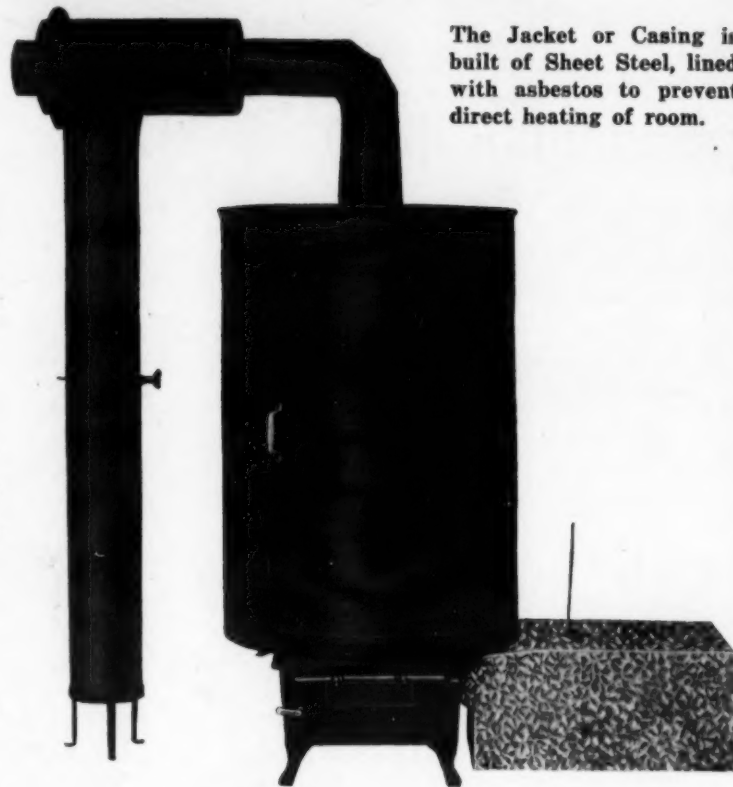
As easy to operate as an ordinary heater, in fact easier than most of them because this one has such perfect draft control.

MANY YEARS OF SERVICE

can be depended upon because the Charter Oak is thoroughly well made throughout from the best materials and by the most skilled workmen.

DESCRIPTIVE CATALOG

giving full information will be mailed upon request.



The Jacket or Casing is built of Sheet Steel, lined with asbestos to prevent direct heating of room.

We also make WARM AIR FURNACES and other Styles of School Room Heaters, also RANGES to use gas, coal or wood FOR DOMESTIC SCIENCE CLASSES.

Charter Oak Stove and Range Co.

Antelope St.
and Conduit.

St. Louis, Mo.

teachers who are still below the high salary mark.

The specific charge is made that the school board increased other expenditures in order to demonstrate the impossibility of a salary increase. In 1907 the administrative cost was 21.3 per cent and the teachers' salaries 78.7 per cent. In 1921 the cost of administration was 30.4 per cent of the whole, while one 69.6 per cent went for teachers' salaries.

It is claimed that principals were asked to order supplies and equipment such as chairs, rugs, desks, moving pictures, telephones and victrolas, whether needed or not, thus increasing the cost of incidentals by 100 per cent, while the teachers' salaries remained stationary.

"For months," says the pamphlet, "information has been coming to the Teachers' federation from every quarter of the city and from practically every school concerning these reckless expenditures. In addition, there has been the loading up of the educational fund with sixty-day appointees in the board of education offices until in the year 1921 the board of education appropriated from the educational fund \$8,714,065 for 'incidentals,' that is, for purposes other than teachers' salaries. This \$8,714,065 for 'incidentals' in 1921 is more than the cost twenty years ago of the entire public school system of Chicago, including buildings, sites, teachers' salaries and everything else.

"This \$8,714,065 for 'incidentals' in 1921 is an increase in 1921 over 1919 of \$4,338,005, or 100 per cent, in the appropriation from the educational fund for 'incidentals'—that is purposes other than the payment of teachers' salaries—while the increase for the same period in the total for payment of teachers' salaries (including new teachers) was 36.6 per cent."

HIGH SCHOOL ADMINISTRATION.

—An effort has recently been made to reinstate fraternities in the New York City high schools. Commissioner H. B. Chambers, of the board of education, in an effort to get information at first hand, has written letters to the principals of the high schools, asking their opinion as to the effect of fraternities in the schools.

The societies were eliminated by the old board of education.

As a result of the letters, a number of the high school principals expressed themselves as opposed to secret societies. Dr. W. L. Feltner, of the Girls' High School, held to the opinion that the societies develop social bitterness and a set of snobs. Friendly faculty supervision was attempted but it failed to work out.

—Goshen, Ind. Fifteen high school students who are members of high school fraternities have been ordered to withdraw their memberships until the completion of their high school course. The board made it clear that it had no objection to fraternities as organizations, but that enforcement of the state law was necessary.

—The proposal of the Seattle voters' information league urging a reorganization of the high schools on the basis of an eight-hour day with seven teaching periods for each teacher and two hundred pupils to the teacher, has been rejected by Supt. F. B. Cooper. The plan has been declared unworkable, not truly economical, objectionable to home interests and an interference with the convenience of self-supporting students. Its adoption, in the opinion of Supt. Cooper, would remove the schools from the accredited list, would overwork the teachers and diminish school efficiency.

—Walla Walla, Wash. Students in the high school have been warned to make a satisfactory grade in at least two subjects or be dropped from the school rolls. The warning became necessary when it was shown that fifteen students had failed to make averages during the semester permitting them to pass.

—New Britain, Conn. The board has adopted a rule providing that a student who does not attain a passing grade in at least three units of value, during any semester, shall be placed on probation at the beginning of the following semester, and that a notice be sent to the parent or guardian.

A student whose membership is forfeited by the provisions of the regulation, will not be reinstated until at least a semester has elapsed since the date of the termination of the previous membership.

—New Haven, Conn. The board of education has suspended for more than a year, two fraternities whose members found it impossible to obey the simple rules laid down to govern fraternities and sororities. The action is believed to be the first step toward the elimination of such organizations.

—New London, Conn. Fraternities will be eliminated at the Bulkeley Boys' High School this year. Hereafter no member of a fraternity may be an athletic team captain or take part in any school organization.

—Fall River, Mass. The board has prohibited all high school dances for the remainder of the year. The action became necessary because of a number of objectionable features which had crept into these affairs.

—The advisory council of the Federation of Teachers' Association of New York City has instructed Mr. Edward Mandel, chairman of the legal interests committee, to enlist support for the proposed constitutional amendment exempting educational expenditures from the two per cent tax limit. The purpose of the amendment is to eliminate the constant clashes between the educational and the city authorities due to the financial problem. Plans have been made for an intensive campaign so that upon being passed by the legislature, there will be no delay a year from next November, when the proposition is placed before the voters.

—New York, N. Y. Because of the condition of the finances, the board of education has eliminated from present consideration, any request for funds for additional high school teachers. The schools are at present facing a shortage of \$1,200,000.

—Canastota, N. Y. The study-recitation plan has been adopted for both the junior and senior high schools this year. The school day consists of six one-hour periods. The pupils study one-half hour and recite one-half hour, with assignments given during the recitation period. Pupils study under the direction of the teachers and the instructors have the opportunity of observing the characteristics of the individual pupils. The plan permits the teacher to become a leader and guide of each pupil and to study his good and bad points, applying remedies suited to the case.

Nearly 2000 Schools Clean With the "TUEC"

In nearly 2000 American schools Tuec Stationary Cleaners are satisfactorily maintaining sanitation and saving 50 per cent and even more of cleaning costs.

Tuec Cleaners are simply made, durable and easily run with the utmost possible silence and provide an economy of operation obtained with no other standard stationary cleaner.



A complete description of the installation required for the Tuec Vacuum Cleaner for any school, together with specifications as to equipment and prices, will gladly be given on request to our Engineering Department, at no cost to you.

The United Electric Co.,
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School swimming pools can be kept clean with the Tuec Pool Cleaning Tool at a saving of 90% of water and heating expense. Write for information.



A Few Schools in Which Tuec Stationary Vacuum Cleaners Have Been Installed

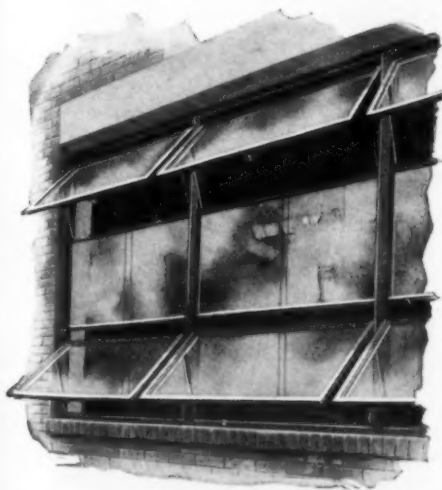
High School, Warsaw, Ind.
Washington High School,
Portland, Ore.
Ohio Wesleyan University,
Delaware, Ohio
Washington School,
Evanston, Ill.
Holy Rosary Parish School,
Pittsburgh, Pa.
Western State Normal,
Hays, Kansas
West Technical High School,
Cleveland, Ohio
Lincoln School, Appleton, Wis.
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Delaney School, St. Louis, Mo.
North East High School,
Kansas City, Mo.

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INVESTMENT VALUE

PROJECTED SASH

The windows with all-service ventilators



Ventilators open out from bottom (see illustration) or in from the top, as specified. Both may be used in same window: e. g., upper ventilator to open out, acting as rain shelter; lower ventilator to open in, acting as wind shield. Either can be reversed for washing from inside.

Made of solid steel bars. Easy to operate. Cannot swell, shrink or warp.

The ideal window for the average school at a very moderate price. Write for Bulletin.

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Investigate this modern method for removing ashes. G & G equipment complies with all municipal ordinances. Your architect has our catalog in his files. He will be glad to give you complete information or we will send catalog direct to you upon request.

A One-Man Hoist

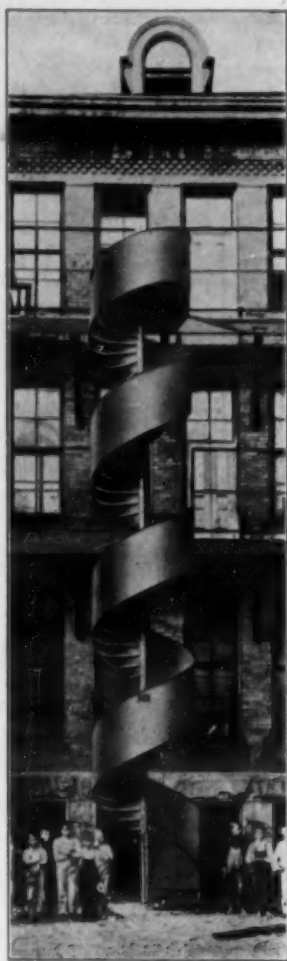
HERE is the way the man you see in the upper illustration goes about his work:

To remove ashes, he first raises telescoping portion of the Hoist to position above sidewalk. This is done by revolving telescoping handle. During this operation, the G & G sidewalk doors automatically rise into place and lock. Operator then brings 5 or 6 filled G & G Swing Bail Ash Cans to foot of Hoist. He then ascends operator's ladder to grade, lower weighted hook at end of cable, hooks on to a bail of one of the cans, and raises can to top of crane. He then revolves crane on ball-bearings to position over top of ash truck and dumps ashes into truck without rehandling at grade level. Empty can is then lowered by gravity (circular illustration shows gear shifting brake device), hook disengaged, and the operation repeated with another can. When all cans have been emptied and returned to base of Hoist, operator descends ladder, lowers hoisting head and at the same time the automatic doors close and lock shut.

GILLIS & GEOGHEGAN
551 West Broadway, New York

The
G & G

REG. U.S. PAT. OFF.
Telescopic Hoist
with Automatic Gear Shifting Brake
Device and Silencer



A Standard Gravity Spiral Fire Escape provides safety to the children in this building.

A Standard Gravity Spiral Fire Escape is the Best Insurance Policy for a School Building.

Many school house buildings are equipped with fire escapes that comply with the law but are found inadequate when actual service and protection is required in relieving the room of the frightened and panic-stricken children.

It is a conceded fact that a Standard Gravity Spiral Fire Escape is the safest, speediest, and has a capacity of approximately 85 children per minute.

A Standard Gravity Spiral Fire Escape usually takes care of the second and third floors of a school building. On each floor there are generally located 5 rooms, each containing an average of 30, or a total of 150 children.

The average legal allowance in case of the accidental death of a child is \$5000. This multiplied by the number of pupils served by a Standard Gravity Spiral Fire Escape makes a total of \$750,000.

A Standard Gravity Spiral Fire Escape installed on a two story building will average, completely installed, \$525.00, or a SAFETY INSURANCE of .0007%.

These figures are based on one year's protection. The Standard Gravity Spiral Fire Escape will last for the life of the building.

The safety and welfare of the children under your care constitutes your first consideration. Dollars and cents should not influence your decision in installing the very best type of fire protection—A Standard Gravity Spiral Fire Escape.

Write for F. E. Catalog.

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CONVEYOR COMPANY

NORTH ST. PAUL, MINN.

NEW YORK
227 Fulton St.

CHICAGO
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CLEVELAND, OHIO
225 Electric Building

Representatives in all principal cities.



Twenty children lost their lives when fire destroyed this Peabody, Mass., School.

THIS SPEAKS OF DURABILT QUALITY and SERVICE

FOND DU LAC PUBLIC SCHOOLS
Office of Superintendent R. W. Fairchild
Fond du Lac, Wisconsin, February 23, 1922.
Durabilt Steel Locker Co., Aurora, Illinois.

Gentlemen:
The installation of one thousand steel lockers ordered from you was completed on January 21st, which was one week ahead of the time called for in your contract. We certainly appreciate your prompt attention to this installation, and I wish to take this occasion to commend you upon the excellent type of locker you are manufacturing.



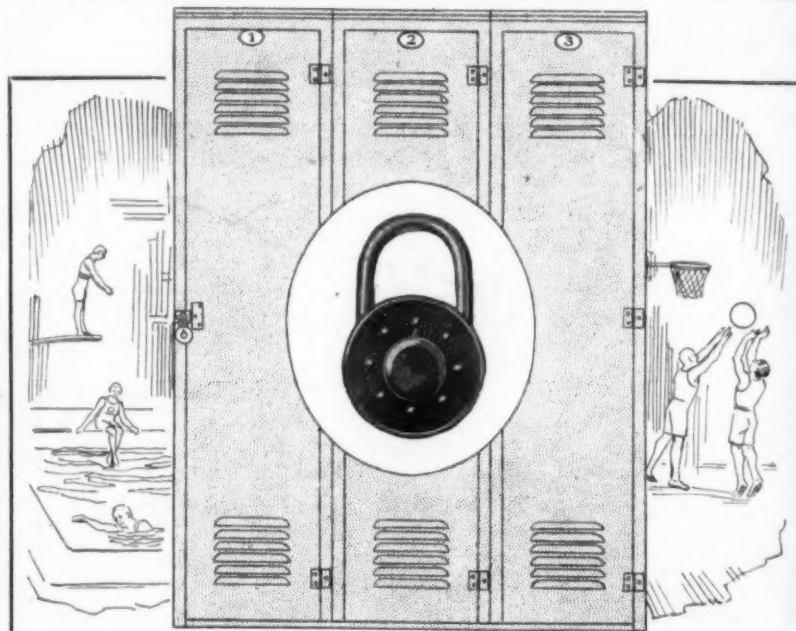
It is not only beautiful and durable but is simple in operation, and we have not found a faulty locker during the four weeks of operation since we came into the building.

The setting of these lockers into the recesses provided for them has been done in such an excellent manner that it has brought forth much favorable comment from the citizens who have inspected the building. It is one of the outstanding features in connection with our new school.

Yours very truly,
R. W. FAIRCHILD.

Write for Locker Circular 5007.

Durabilt Steel Locker Co.
400 Arnold Ave. AURORA, ILL.



For the Gym Lockers

USE THE STEEN KEYLESS COMBINATION LOCK

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Made of the best materials obtainable; designed by lock engineers who stand at the head of their profession, the STEEN KEYLESS COMBINATION LOCK has the strength and endurance of Gibraltar. It resists every attempt to open it unless the correct combination is used. A sample lock will be sent for inspection to responsible officials.

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REVISION OF SCHOOL ACCOUNTING REPORTS.

(Continued from Page 45)

struction. Expenditures should be divided between the different types of schools found in the city school system. Instruction is subdivided into general supervision and instruction proper.

10. **Supervisors.**—General supervision of instruction shall be defined as that group of activities which has to do with the actual improvement of instruction through direct contact with principal or teacher, including activities as (1) preparation and development of courses of study and bulletins on method; (2) examination of textbooks; (3) demonstration teaching; (4) institutes and teachers' meetings for the improvement of instruction; (5) personal conferences for the interpretation of methods and curricula; (6) classroom visitation and inspection; (7) setting up standards of achievement.

This activity shall include supervisors in charge of special departments or subjects as defined above who devote one-half or more of their time to supervision.

In case a supervisor renders service as supervisor in more than one kind of school charge his salary, clerk hire, and other expenses to the type of school in which he gives the greater portion of his time. In case such employee performs one function in one kind of school and another function in another kind of school, as that of supervisor in the elementary schools and that of teacher in the high school, charge his salary, clerk hire, and other expenses to the type of school in which he gives the major portion of his time. If his time is equally divided, charge such expenditures to both types of schools.

11. **Other expenses of supervision.**—Include traveling and other expenses allowed in attending conventions, institutes, etc., street car fares, report blanks, stationery, etc., used by the supervisors, expenses in connection with holding teachers' institutes, teachers' traveling and other expenses allowed in attending conventions, institutes, etc.

12. **Elementary instruction.**—Include after this item all expenditures in elementary grades not definitely organized as a junior or senior high school or as a high school (grades 9-12,

inclusive). Salaries, clerk hire, and expenses of supervisors and teachers in the elementary grades should be kept separate and distinct from corresponding expenditures in junior high schools. In case a teacher gives part of his time to the elementary grades and part to the junior high school charge such expenditures to the school in which he gives the major portion of his time. If such service is equally divided charge such expenditures to both types of schools.

13. **Intermediate or junior high schools.**—Include after this item all expenditures for grades 7-9, inclusive, when the schools are organized on the 6-3-3 plan; for grades 7-8, inclusive, when organized on the 6-2-4 plan; and for grades 7-10, inclusive, if organized on the 6-4-2 plan. After this item report all expenditures for instruction for such schools, whether they are housed separately or with an elementary or senior high school. In case a junior high school teacher devotes part of his time to giving instruction in the elementary grades or senior high school charge his salary to the school in which he gives the major portion of his time. If such service is equally divided, charge his salary to the higher type of school.

14. **High school.**—After this item report expenditures for senior high schools and for all high schools not organized on the junior-senior plan. Report here grades 9-12, inclusive, in schools organized on the 8-4 or 6-2-4 plan and grades 10-12, inclusive, in schools organized on the 6-3-3 plan. Pupils enrolled in the thirteenth grade, if any, should also be included here. In case a high school teacher devotes part of his time to giving instruction to a junior high school charge his salary to the school in which he gives the major portion of his time. If such service is equally divided charge his salary to the high school.

15. **Vocational, trade and continuation schools.**—Report here instruction costs in schools definitely organized for giving vocational, trade, or continuation courses. Do not include departments of regular high schools offering such courses.

16. **Teacher training.**—Include only those schools (city normal schools) definitely organized for giving teacher training work. Do not

include teacher training work offered as a part of the regular high school course.

17. **Collegiate instruction.**—Report expenditures for collegiate instruction only when such expenditures are managed and disbursed through the city board of education. Junior colleges as well as four-year colleges should be included here. Do not include a fiscal report of municipal colleges controlled by a separate board of trustees.

18. **Administration.**—Include the principal and assistant principal and other administrative and supervising officers within the building only in case they devote half or more than half of their time to administration or supervision. Administration within a building by some one connected with the building shall be defined as that group of activities that deals with (1) the carrying out of policies which provide physical and educational conditions under which pupil and teacher may work to best advantage; (2) the preparation of reports, collection of data and compilation of statistical and attendance records; (3) research activities; (4) the preparation and circulation of publicity material; (5) the establishing and maintaining of school and home relationships; (6) the classification and promotion of pupils; (7) the maintenance of school discipline; (8) the storage and distribution of materials and supplies; (9) the inspection of the physical plant; (10) the rating of teachers. Supervision within a building by some person attached to the building shall be defined as that group of activities which have to do with the improvement of classroom instruction as defined under general supervision and should be included with administration costs.

19. **Teaching.**—Teaching shall be defined as time spent in the direct instruction of children whether in groups or as individuals, testing, the correction of papers in school, and time spent on preparation in school.

20. **Educational supplies.**—Supplies are those things which, when once used, are actually or constructively consumed, including writing paper, drawing paper, blank books, chalk, ink, pencils, pens, adhesives, fasteners, carbon paper, rubber stamps, typewriter supplies, magazines for classroom use (not those purchased for the school library) newspapers, test tubes, litmus



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paper, filter paper, polishing and abrading supplies, drugs, chemicals, cleansers, laboratory supplies, food supplies. Freight and cartage on supplies should be included. Care should be taken to exclude from educational supplies any article made of durable material which is supposed to last year after year with reasonable use. No permanent laboratory apparatus or equipment should be included.

21. **Free text and school library books.**—Include cost of free textbooks, supplementary books and also magazines, library books, etc., supplied to the school library when paid for out of school district funds. The cost of school library books for a new library should be reported under "Capital Outlay." The expenses of maintaining and operating public libraries to which all pupils or even the public, may have access should be reported under "Auxiliary Agencies." Payments for textbooks sold to the pupils during the school year should not be entered in this report as the money so spent is still available for use. Excess stock should be reported either after items 13 (b), C-3, or C-7.

22. **Other expenses of instruction.**—Include expenses in connection with commencement exercises or school entertainments, such as music, decorations, programs, diplomas, etc. Street car fare of teachers, where allowed, should be included under this head. Expenses incident to teachers' institutes should be included under supervision.

B-III. Coordinate Activities.

23. **Co-ordinate activities.**—In this section report salaries and expenses of all field workers in compulsory attendance, medical inspection, dental inspection, and nurse service. If necessary prorate such expenditures among types of schools on the basis of enrollment. The salaries and expenses of the directors of these various activities who supervise the field workers should be reported under general control.

B-IV. Auxiliary Agencies.

24. **Libraries (public).**—Report here salaries, cost of books, magazines, pamphlets, and operating expenses for maintaining free public libraries in case such libraries are maintained

by the city board of education. Do not include public libraries under the control of other public boards nor the libraries devoted exclusively to the service of any individual school.

25. **Baths.**—Include expenditures for salaries, supplies, towels, fuel, etc., used in providing baths for needy children. Do not include operating expenses of swimming pools, shower baths, etc., maintained in connection with a school building. Such expenditures constitute a part of the operating expenses of such schools.

26. **Transportation of pupils.**—Include all expenditures out of school funds for the transportation of pupils to and from school, including the purchase or hire, operation, and maintenance of vehicles, street car fares, etc.

27. **Public lunches and lunch room deficits.**—Include all costs of providing free lunches to the undernourished, and also any deficits incurred in maintaining the usual school lunch rooms. Profits from such sources are to be reported under "all other revenue receipts."

28. **Operation of playgrounds.**—Include payments for recreation activities, including salaries and wages of directors, supervisors, teachers, and attendants having to do with playgrounds and recreation centers, school athletics, track and field meets, contests, field days, matched games, and all other exercises of a recreative nature not included as a part of the regular curriculum. Salaries and expenses of physical training teachers giving instruction required of pupils should be reported under "Instruction."

Classify expenses for personal bonds under column headed "Other Objects."

B-V. Fixed Charges.

29. **Other expenses of fixed charges, including payments of warrants and orders of preceding year.**—This fiscal report is to be executed on the payment basis and not on the order basis. Under this heading, therefore, should be included all payments for warrants or orders issued in the preceding school year. Although the supplies or other articles ordered may not have been or may have been delivered, used, or consumed in the current school year, such payments should be entered under this heading.

B-VI. Operation of Plant.

30. **Operation of school plant.**—Under this general heading should be included all expenditures for keeping the buildings open and ready for use. In cases where schools of different types occupy the same building or buildings, the expenses for operating the plants should be apportioned among the different kinds of schools according to the number of square feet of floor space occupied by them.

31. **Wages of janitors and other employees.**—Include salaries or pay of janitors, janitors' helpers, engineers, firemen, switchboard operators, matrons, watchmen, etc.

32. **Engineers' and janitors' supplies.**—Supplies include articles which are consumed in using or are not expected to last from year to year, such as brooms, mops, soap, dusters, floor oil, and other cleaning supplies; electric bulbs, paper cups, and toilet supplies; and other miscellaneous articles necessary for the operation of the school plant.

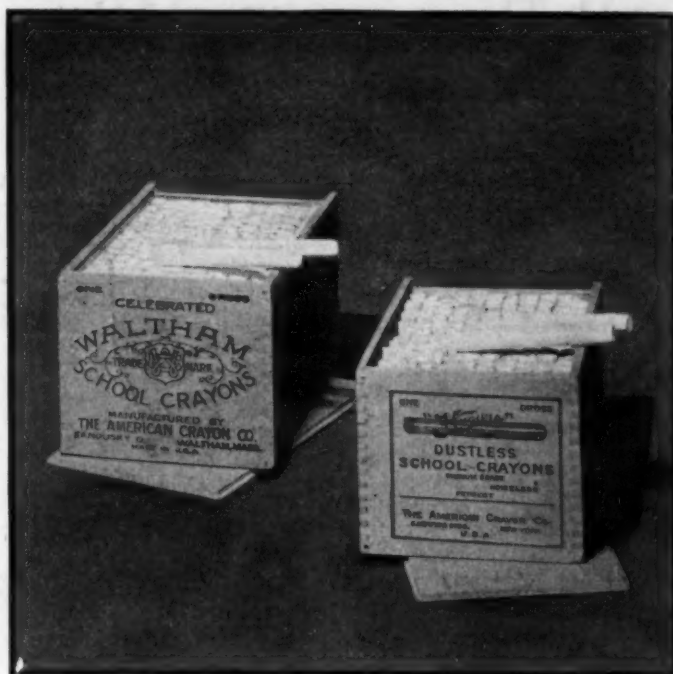
33. **Fuel.**—Include all expenditures for coal, wood, and other fuel, including freight, cartage, and other expenses incurred in securing the same.

34. **Water.**—Include charges for water used in buildings and on grounds.

B-VII. Maintenance of School Plant.

35. **Maintenance of school plant.**—Under this head should be included all expenditures made for the restoration of any piece of property (grounds, buildings, or equipment) to its original condition of completeness or efficiency. This includes the repair of buildings and upkeep of grounds and repairs and replacement of old or worn-out equipment. Include cost of labor and materials incident to the repair of buildings, including painting, glazing and to repair of plumbing, lighting, heating, and ventilation equipment. Do not include expenditures for improvement of grounds in the nature of permanent equipment, alteration of old buildings, such as tearing out walls, enlarging rooms, building of additions, putting in partitions, nor for additions to equipment, all of which should be included under "Capital Outlay."

(Continued on Page 125)



Two things you should demand of a chalk

THERE are two qualities which every good chalk should possess. One is strength, without the sacrifice of that softness which enables you to mark easily on the blackboard. The other is whiteness, without the presence of clay or grit.

If these two qualities are not developed to a high degree in the chalk you are using, you are not getting the value you should demand in your chalk.

Even though the chalk is pure, leaving a soft white mark on the board, if it crumbles easily while in use there is much waste material. And this waste makes the chalk costly.

Yet if whiteness and softness are gained through the use of clay, your boards will suffer. The clay contains a semi-grease, which in time will cause your boards to shine and turn gray.

Some have said that strength must be sacrificed for quality in chalk. It is true that there are chalks made of good materials,

whose breaking strength is low. But this need not be, as was proved in tests made recently in the American Crayon Company factories.

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It seems important, then, both for economy and for good results, that you should choose a chalk, such as Hygieia, which sacrifices neither strength for whiteness, nor whiteness for strength—a chalk which contains both properties to the maximum degree.

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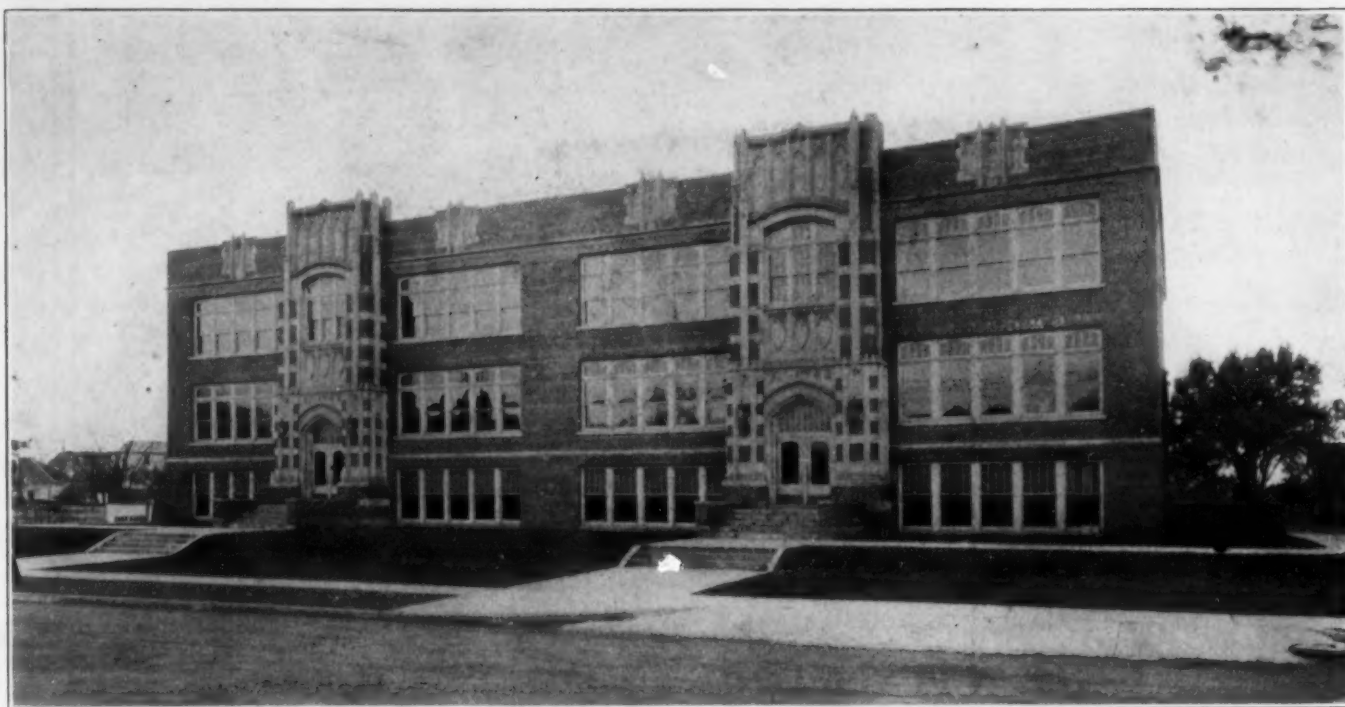
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INDIANA

(Continued from Page 122)

B-VIII. Capital Outlay.

36. **Purchase of land.**—Include all land purchased—school sites, additions to school sites, playgrounds, athletic fields, etc., together with all cost of acquiring title to such grounds.

37. **Improvement to sites.**—Include here payments for improvements to previously acquired school grounds, playgrounds, athletic fields, etc., but not for improvements to sites on which new buildings are erected or to playgrounds to be operated in connection with new buildings.

38. **Buildings.**—This heading includes payments for new buildings, advertisements for contracts, payments on contracts for construction, installation of plumbing, lighting, heating, ventilation, electrical wiring, etc., and all expenditures for legal services chargeable specifically to new building costs.

39. **Landscaping and playgrounds.**—Include under this heading the cost of landscaping incidental to the erection of a new building and the cost of playgrounds to be operated in connection with a new building. Do not include here the original cost of such sites or playgrounds.

40. **New equipment.**—Include purchase of all new equipment (except such as is provided to replace worn-out or destroyed similar equipment), such as tables, desks, cupboards, filing cabinets, racks, stands, typewriting machines, adding machines, duplicating machines, and other labor-saving devices; electric fans; physical, chemical, biological, and other scientific laboratory and demonstration apparatus; machinery, tools and other equipment for vocational instruction, domestic science, manual training, etc.

41. **Alteration of old buildings.**—Include cost of tearing out walls, enlarging rooms, building additions, putting in partitions, being careful not to include mere repairs.

E. Value of School Property.

1. **Value of school property.**—There are three plausible bases on which the value of school property may be estimated (1) original cost of building, (2) replacement value, and (3) present value. To secure uniformity in reports it is suggested that the original cost of school property be reported. The replacement value, that is, what it would cost to replace the present

building, does not represent the true and actual value of such property and does not represent the original cost to the taxpayer. Furthermore, such values are largely gross estimates. The present value of school property is likely to be a mere guess, since, if such property were sold for commercial use, it might bring considerably more or less than its present value for school purposes. The original cost is, therefore, the most accurate value, is the most easily secured, and represents what a given building cost the community. The original cost, however, does not take depreciation into account, but in many instances this factor is offset by appreciation, or increased value in school lots or even in school buildings. To secure accurately the values of depreciation and appreciation is practically impossible and is not contemplated in this section of the schedule.

G. Taxation.

1. **School tax rate for maintenance purposes.**—This rate should be expressed as mills on the dollar or as cents on the hundred dollars (state which method of designation is used). The rate given here should include the tax rate levied for meeting the current expenses of the school year. There will usually be only a city tax which should be reported under "Local." If separate State or county taxes are levied on city property for school purposes, these should be included also, care being taken to indicate in the proper places the rates for "State" or "County" purposes. Do not include special tax rates for the construction of new buildings or for meeting bonded or other debt obligations. "Payments of interest on bonded indebtedness," if not included in the special tax rate levied to provide sinking funds should be included here. The tax rate referred to in this note shall be computed by dividing the money raised by taxation during the year by the valuation of the city for the year.

2. **School tax rate for other purposes.**—Include the special tax rates (city and county) levied for the construction of buildings and the purchase of grounds; for meeting bonded and other debt obligations; and for providing sinking funds.

3. **The assessed valuation of property taxed for school purposes.**—Report the valuation of

property (personal, real estate, and public utilities) on which the tax rates reported in items 1 and 2 are levied. This valuation will usually be the assessed valuation. In States where the assessed valuation is different from the monetary valuation on which taxes are levied, do not report the assessed valuation, but instead the valuation of property on which the tax rates are actually computed.

4. **Estimated percentage assessed valuation is of the true property value.**—This percentage should express the relationship between the valuation on which the tax rates are actually computed (see item 3) and the estimated true property value.

—Evansville, Ind. Plans for the erection of the East side high school provide for an expenditure of about \$400,000. A site of fifteen acres has been purchased and construction work will begin shortly.

—Hartford, Conn. The tax rate for the Arsenal District has been reduced from eight to six mills in the face of determined opposition. It was voted to borrow \$25,000 for the current expenses of the school district.

—The Milwaukee board of school directors has recently characterized as unfair the report of the Fire Prevention Bureau of the Association of Commerce covering an investigation of the fire dangers in school buildings. Secretary F. M. Harbach, referring to that part of the report which says that 67 Class D buildings are unsafe for occupancy, declares that the report must mean buildings in which the heating apparatus is in the building and not in fireproof rooms. If this is meant, there are 37 of these buildings and steps have been taken to fireproof boiler, fuel and ash rooms in such buildings. The board has adopted a policy of putting all heating plants in separate buildings as rapidly as the funds permit, and in the meantime to fireproof boiler and fuel rooms.

It has been pointed out that there are few Class A buildings in the country. Class A buildings must have metal doors and window frames and these have been provided only in the most modern structures. It is estimated there are not more than 300 buildings of the Class A type in the entire country.

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The laboratory drain lines of the High School are a source of expense, trouble, and injury to the structure itself, unless they are of Duriron.

The destroying action of the acids and alkalis on pipe of other material starts as soon as used, and it is only a matter of time until they eat through. Then the replacement simply means another when this process repeats itself. The expense is constant, and is practically a fixed charge against maintenance.



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Duriron Acid-Proof Pipe absolutely eliminates this condition. It is entirely unaffected by the corrosives used in the school laboratory, and its installation is paid-up insurance against all such future expense for all time.

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TESTING THE HEATING AND VENTILATION OF SCHOOL BUILDINGS.

(Concluded from Page 60)

each of the respective columns. The proper wet-bulb temperature is determined by noting the point of intersection of the "light work line" and the 20 ft. air motion line; this is 55 deg. wet bulb. Since the actual wet bulb tem-

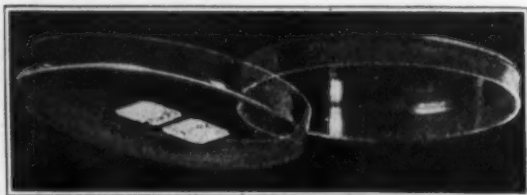


FIG. 3. CULTURE PLATES FOR DETERMINING THE BACTERIA IN THE AIR.

perature as determined by the test is 58 deg. then the wet bulb difference is three deg. This value is plotted in the first column and the penalization as read in the "—" portion is $-5\frac{3}{8}$ per cent. For the 10,000 particles of Dust, the penalization is a -1 per cent; for the Bacteria, -1 per cent; for the Odors $-1\frac{1}{2}$ per cent; for the CO_2 , $-\frac{7}{8}$ per cent; for Other Injurious Substances, -0 per cent, and for Distribution $-5\frac{3}{8}$ per cent. The sum of all these penalizations is $15\frac{3}{8}$ per cent. The sum of all these penalizations is $15\frac{3}{8}$ per cent. Therefore the percent of perfect ventilation in the room is $100 - 15\frac{3}{8} = 84\frac{5}{8}$ per cent. This value is then plotted in the last column marked Per Cent of Perfect.

The instruments required for these tests are not expensive and some of them are found in every laboratory. Dr. E. V. Hill has made up convenient outfits for the purpose. The dust counter invented by the doctor is best suited to the work with these charts. The value of

placing the ventilation of schoolhouses on a scientific basis, to be measured in understandable terms is so great that the time and expense are fully justified from public funds.

The feeling of uncertainty in the mind of some teachers as to the effect on the health should be cleared up in the most positive and emphatic manner. In the opinion of the writer nothing is doing so much to distract the teacher

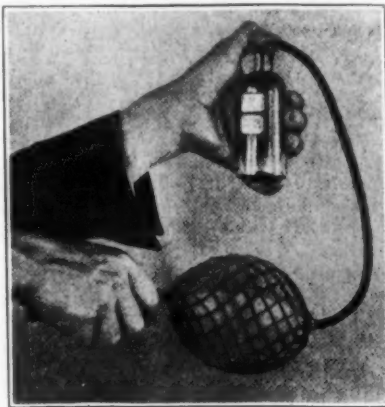


FIG. 4. TAKING AN AIR SAMPLE.

from her real teaching work as the attention to the heating system. Let her be assured at all times that there are no lurking mysterious health demons in the modern mechanically—electrically cleansed air of our new school buildings.

SCHOOL BOARD NOTES.

—A survey of the school buildings of Akron, O., has been made by the Department of Maintenance as a means of determining the adequacy of the physical plants. As a result of the study, the buildings have been rated according to location, playground area, fire protection, janitor service, water supply and toilet systems. The Engelhardt-Strayer score card was used in rat-

ing the schools in order that they may be scientifically compared with other schools.

—The New York City department of education has proposed the erection of larger elementary schools as a means of more promptly overcoming the congested condition in the several buildings. It is proposed that in three sections of the city the buildings be increased in size from the standard 48-room type to approximately 72 rooms. The 72-room buildings will have added classrooms for approximately 1,000 pupils.

—Supt. Frank Cody of Detroit, in a recent letter to the people of the city, shows why it is that more money is needed for the schools. It is because they are growing at a tremendous rate. There are 14,240 more children in school now than a year ago. While the city has doubled in size, the schools have increased three times since 1909-10.

In emphasizing the need for more buildings, Supt. Cody points to 7,053 children on part time, 4,281 in rented or temporary buildings, 4,005 buildings that are more than fifty years old, and to 28,667 in classes too large to permit the best teaching. Forty-five per cent of the elementary children are at present inadequately cared for. It is probable the same overcrowded conditions will prevail next year as it is estimated that 12,000 more children will be enrolled than at present.

—Decatur, Ill. The citizens voted favorably on a proposition to increase the tax for educational purposes. The increase of the school rate will give the educational fund an addition of between \$125,000 and \$150,000 which will enable the board to overcome a deficit already created amounting to 45,000.

—Indianapolis, Ind. Tentative plans for the long delayed school building program have been made by the board of school directors. With some changes, the program of the old board has been included in the new plan which calls for a number of new buildings and additions to old structures.

—Mr. H. C. Buell, formerly superintendent of schools at Janesville, Wis., died in February, at Polo, Ill., where he had been superintendent for three years.

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Chicago, Ill., U. S. A.

CHATS DURING RECESS.

The abolition of corporal punishment is not final. At Columbia, Illinois, boys have caused the school so much trouble that they landed in jail. The judge offered a solution. "Let the school board employ a man teacher with both strength and courage, and arm him with a stout switch. Then give 'Hail Columbia' to all who misbehave!"

"Better rural schools and better roads will stop the tide to the cities," says an editor, more than that, better roads will make for better rural schools, and vice versa.

"The child's job at present is to go to school", says Superintendent Mortenson of Chicago. That is an expressive way to put it. First an education and then the real job of life and living.

Somebody charged Dr. Finegan, the state superintendent of Pennsylvania, with "passing the buck". And then the vigorous doctor demonstrated that he never passed anything educational but grabbed it by the nape of the neck and placed it where it belonged.

Because a high school teacher aged 45 years at Avon, N. Y., married one of her pupils aged 19, some of the students have gone on a strike. Better let the school board do the striking.

GRAPHIC AIDS TO SCHOOL ADMINISTRATION.

(Continued from Page 40)

The left-hand slide of the desk was chosen because it was less easily accessible to visitors, and hence more private. Using the space under

the plate glass did not interfere with the use of the top of the slide for the usual purposes, but did afford a very accessible and safe place to keep the plans for the month. The appearance of the desk top with the slide drawn out for reference is shown in Figure 12.

As duties appeared and engagements for the month were made, they were written in on the sheet in the space reserved for the day in question. A glance at the chart each morning kept the administrator posted on engagements for the day and for the coming days. The value of this to a busy man is beyond calculation. The plan needs but a trial by any executive to convince him of its feasibility and service.

Job Envelope

DATE ORDERED: 6 Jan 22
DATE COMPLETED: 3 Jan 22

DELIVERED: 3 Jan 22
REPORTED B. O.: 7 Jan 22
S. O. NO.: 4093
JOB NO.: 504

MATERIAL

☐ On hand

☒ Requisition, No. 178 date 17 Jan 22

No. _____ date _____

No. _____ date _____

TIME

Student labor 2.09 hrs. at .07 1.48

Instructor's labor _____ hrs. at _____

Total labor \$ 1.48

FIG. 10. THE JOB ENVELOPE, A CONTAINER FOR ALL DOCUMENTS PERTAINING TO A GIVEN JOB. THESE ARE FILED ACCORDING TO NUMBER IN A TRAY IN THE SHOP OFFICE.

PROCEDURE FOR NOVEMBER, 1921					
WEEK	DAY	DATE	TIME	DATE	TIME
MONDAY	1	NOV 1	8:00	14	NOV 14
TUESDAY	2	NOV 2	8:00	15	NOV 15
WEDNESDAY	3	NOV 3	8:00	16	NOV 16
THURSDAY	4	NOV 4	8:00	17	NOV 17
FRIDAY	5	NOV 5	8:00	18	NOV 18
SATURDAY	6	NOV 6	8:00	19	NOV 19
SUNDAY	7	NOV 7	8:00	20	NOV 20
	8	NOV 8	8:00	21	NOV 21
	9	NOV 9	8:00	22	NOV 22
	10	NOV 10	8:00	23	NOV 23
	11	NOV 11	8:00	24	NOV 24
	12	NOV 12	8:00	25	NOV 25
	13	NOV 13	8:00	26	NOV 26
	14	NOV 14	8:00	27	NOV 27
	15	NOV 15	8:00	28	NOV 28
	16	NOV 16	8:00	29	NOV 29
	17	NOV 17	8:00	30	NOV 30
	18	NOV 18	8:00	31	NOV 31

FIG. 11. THE AUTHOR'S PROCEDURE CHART FOR NOVEMBER, 1921. SUCH EFFORTS TOWARD PREVISION AID IN PROMPT AND PREPARED MEETING OF ENGAGEMENTS.

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U. S. PAT. OFFICE

ECONOMY Drawing Tables and Sectional Filing Cases

*Read what
a user
says:*

Only one of the many unsolicited testimonials that we are constantly receiving. The first paragraph indicates why we get so many repeat orders—the second paragraph how the repeat orders come in.

We design and manufacture Drawing Tables, Filing Cases and Drafting room furniture.

We are splendidly equipped to turn out "stock" orders as well as "specialties." We give our personal attention to every one of your needs. We have made a study of, and proved the **ECONOMICAL** use of the **ECONOMY** furniture in the drafting room.

Write Today.



THE ECONOMY DRAWING TABLE & MFG. CO., Adrian Michigan

THE MARK OF QUALITY
REGISTERED
ECONOMY
U. S. PAT. OFFICE
IT PROTECTS THE USER

Summary.

Routine is the regular and habitual way of discharging customary duties. Establishing routine is a necessary part of every executive's duties, wherein lies much of the success or failure of the business. A routine book is a desirable means of advising all members of an organization of the required routine. The use of charts of routine saves time, economizes effort, and promotes smoothness of operation of a business. The type of chart to be chosen depends upon the nature of the routine to be depicted. All good charts reduce the effort necessary for comprehension of the routine unit. Charts are useful as means of checking and eliminating useless motions. A monthly procedure chart insures against forgetting important engagements and aids in planning work in advance.



—Mr. Patrick Jones, Superintendent of School Supplies for the New York City board of education, was recently presented with a silver loving cup by the employees of the Bureau of Supplies as a token of congratulation on his reelection to the office by the board of education. The design of the cup is unusually artistic and emphasizes the beauty of the inscription, consisting of the seal of the board of education and the wording:

"Presented to Patrick Jones, superintendent of school supplies, board of education, school district of New York, by his fellow employees, in recognition of his efficiency and as a token of their high regard and friendship—1922."

Mr. Jones entered the service of the board on November 1, 1893, and on August 25, 1904, was

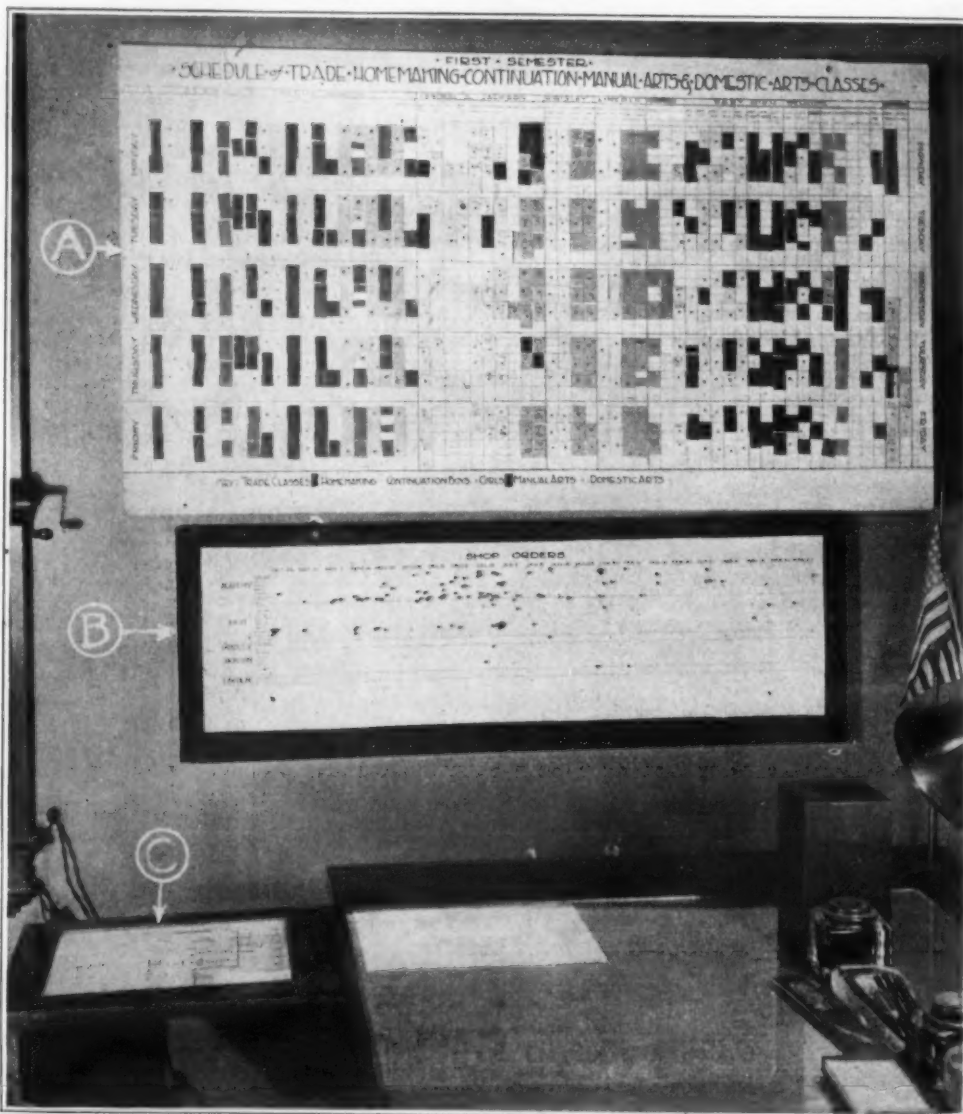


FIG. 12. HOW THE PROCEDURE CHART IS INSTALLED.

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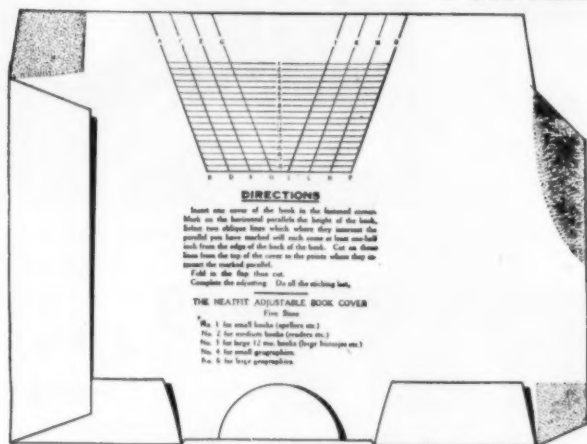
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elected to fill an unexpired term as superintendent of school supplies. In January, 1910, he was elected for a six-year term, and in February, 1922, he was reelected for the fourth time.

—Mr. W. S. Y. Critchley of Mendota, Ill., has been elected superintendent of schools at Dupue, to succeed the late Prof. D. G. Calvert.

—Supt. B. C. Van Ingen of Frankfort, N. Y., has announced his resignation at the close of the school year.

—Mr. H. G. Coons has been elected superintendent of schools at Lake Placid, N. Y.

ARE YOU READY FOR ACTION?

(Concluded from Page 36)

I happen to know the president of her board. He is very fond of gunning. Weeks before the hunting season opens he has his gun, his shells, his hunting jacket, boots, cap, even his lunch box ship shape. A day or two before he expects to use them he arranges the shells in the pockets of his jacket: "I want everything ready so that I can take time by the forelock, and needn't bother with these things when there is so much doing."

Last fall a certain rural board was prevailed upon to buy a set of much needed books for each school in the district, to be delivered at the home of one of the trustees. For some reason or other this trustee will not deliver the books at the proper places, nor allow any one else to do so. "He ought to be made to give them up!" Ridiculous!" All true. But you recall that in spite of King Lear's determined "They dare not put my man in the stocks!" there sat Kent, already in the stocks.

No matter what this trustee ought to do, or ought to be made to do, the fact remains that those teachers and children are without the books. What good to them are ten thousand books, if they don't reach the children?

If these cases I have cited were very unusual there would be small merit in speaking of them

here, but they are found frequently enough to detract much from the efficiency of this very expensive business of teaching. For it is a business, the business end of which is in the hands of the board of education.

It is the biggest business in the state; the biggest in amount of money invested, in number of people employed, and in number of "stockholders." It is also biggest in respect to the commodity produced, the future men and women of the state.

How do business-like boards do these things? They make their inventory for the following year about April first,—repairs, supplies, new departures, and all. This gives them four or five months in which to receive bids, secure all things needful (or all that they can afford) and have them ready, so that the schools may start out on the first day "full speed ahead."

We hear so frequently, both among trustees and parents, that "The first few weeks don't amount to anything anyway." This is too easily said to be quite worth the saying—or the answering.

Every man who has had experience enough to be chosen a school trustee, has had experience enough to know that there come situations in life when the difference between courage and success, and discouragement and failure, turns on very small things. With a teacher or a pupil who is somewhere in the middle ground, the situation growing out of proper equipment at the proper time, or the lack of it, may be the deciding factor.

SOME SCHOOL DOINGS IN RURAL MONTANA.

(Concluded from Page 56)

Jan. 29, 30—Telephone call to come to B. at once. Principal was asked to leave and re-

fused. Primary teacher was too free in her attentions. Trustee had said:

"One year we hired all young girls and they spent most of their time thinking about fellows. The next year we hired married women. They spent most of their time thinking about their children. This year we decided to hire old maids who had given up hope, but I guess considering our mix-up this year they never do give up hope." The principal was reinstated and everything went merrily on.

TEACHERS' AGENCIES.

(Concluded from Page 67)

the agency is saved the suspicion that "it may be taking undue liberties" in the matter. School officers will not receive the erroneous impression that superintendents are as plentiful as jack rabbits in the closed season. All parties will be satisfied. The superintendent in particular, who has teachers to hire will not be apt to forget the agency that courteously respected his own interests and will entertain the most cordial feeling toward it, even though he may engage no teachers through it.

I believe that agencies will find it good business as well as good ethics to go one step farther. A notice from a member of a board of education requesting the nomination of candidates may be unauthorized by the board of education. Here, again, a letter to the superintendent will bring forth an explanation of the situation, and again the agency has found a new friend.

What I have presented is, I realize, entirely from the superintendent's viewpoint, written by one who believes that the conditions surrounding the tenure of a superintendent's position should not be tinkered with by outside parties until his board has definitely declared their position toward him.



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MANUFACTURERS OF THE LARGEST LINE OF ADHESIVES IN THE UNITED STATES

RATING THE EFFICIENCY OF THE HIGH SCHOOL PRINCIPAL.

(Concluded from Page 57)

66. Arrange clear, adequate, accessible records
of pupils, teachers, and experiments?
67. Insure that building is kept clean and
sanitary?
68. Counsel with superintendent concerning
financial status of district?
69. See that work of each semester begins as
early as opening of second day of first week? ..
70. Establish promptness in opening and clos-
ing of classes?
71. See that there is a high percentage of at-
tendance, low percentage of tardiness, class
skipping, etc?

SOME OF THE HIGHEST PAID JUNIOR HIGH SCHOOL TEACHERS.

(Concluded from Page 58)

Michigan:			
Grand Rapids	1200	2500	9
Lansing	1350	2500	—
Minnesota:			
Minneapolis	1200	2500	13
Missouri:			
Kansas City	1200	2200	13
Nebraska:			
Lincoln	1000	2200	—
New Jersey:			
Atlantic City	1400	2000	—
Englewood	1200	2100	8
Hoboken	1600	2860	7
Montclair	1475	2550	—
Newark	1800	2900	12
Trenton	—	2400	—
New Brunswick	—	2500	—
Passaic	1300	2150	7
W. New York	1200	2500	13
West Orange	1300	2400	7
New York:			
Amsterdam	1400	2500	8
New York City	1900	3250	9
North Dakota:			
Fargo	1300	2000	—
Ohio:			
Canton	1200	2250	—

Cleveland	1300	3000	—
Cleveland Heights ...	1200	3300	12
Columbus	1250	2500	10
East Cleveland	1400	2600	10
Toledo	1500	2500	10
Youngstown	1250	3000	15
Warren	1200	2050	9
Oklahoma:			
Tulsa	1320	2000	—
Ardmore	1500	2280	—
Pennsylvania:			
Allentown	1000	2400	—
Easton	1400	2200	8
Erie	1400	2200	8
Harrisburg	1100	2500	—
Hazleton	1000	2200	8
Norristown	1400	2400	8
Philadelphia	1800	2800	8
Pittsburgh	1800	2800	8
Scranton	1400	2600	8
South Dakota:			
Aberdeen	1200	2000	8
Washington:			
Hoquiam	1400	2100	7
Wisconsin:			
Kenosha	1320	2028	—
Racine	1100	2100	10
Sheboygan	1250	2300	10
Wausau	1215	2500	—

SCHOOL BOARD NOTES.

—Attorney General Thompson of the state of Washington has ruled that school directors have full jurisdiction over the transportation of pupils and have the power to determine the manner of transportation, and authority to enter into contracts to give such service for more than one year provided the indebtedness of the district does not exceed the total current revenues. The opinion states further that directors have the power to expend school funds for the construction of swimming tanks.

—Mansfield, O. The law requiring school boards not only to transport pupils but to pay their tuition has proved so expensive that three townships in Richland County have voted bond issues to build township high schools. Springfield township has voted a bond issue of \$80,000 Franklin one for \$55,000 and Cass one for \$40,000. Springfield has transported more than

sixty boys and girls to high schools in Mansfield, Galion and Crestline.

—The Boston school board has eliminated Kipling's Reader for Upper Grades and Hughes's Community Civics from the list of school books on account of objections raised to statements concerning the colored man.

Mr. W. L. Shearer has retired from the school board of Toppenish, Wash., after a service of 21 years. In that period Mr. Shearer has seen the school system grow from an initial organization with one teacher and a handful of children to its present proportions. He has assisted in providing the district with modern, well-equipped buildings, has promoted the plans for a new high school and was instrumental in obtaining the spacious campus which accommodates the high school.

—Secretary Joseph Beals of the Worcester, Mass., school board, has asked for instructions on the expenditure of the limited money now available for books and supplies. Mr. Beals asked that the school board assume the responsibility for appropriations after the money is exhausted.

—Miss Lois Hutchinson, who for the past seven months, has served as clerk of the Toppenish, Wash., school board, has tendered her resignation.

At Milwaukee, Wis., the fire department reported that more than half of the school buildings were unsafe. The school board has combated this contention. Some of the schools have assembly halls in the third floor, wooden stairways, and unprotected furnaces in basements. Improvements will follow.

—Illegal expenditures amounting to \$2,689,502 were made during the pasts four years by the Cleveland board of education according to a report made by the state examiner of accounts. The charge is based upon the fact that 204 contracts were made without the formality of advertising for bids, the law requiring this for all contracts exceeding the sum of \$1,500. The board replies by stating that the contracts in question were of an emergency character, hence regular.

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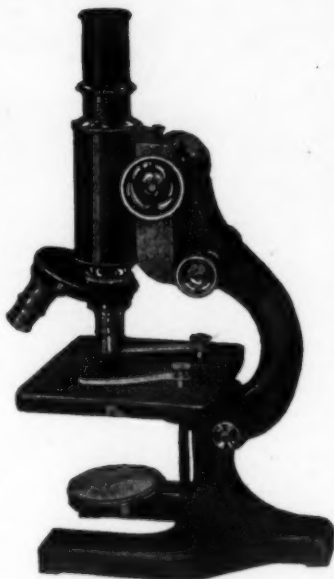
with side-fine adjustment
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**An Ideal Instrument
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Among its many advantageous
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The Student Becomes an Enthusiast

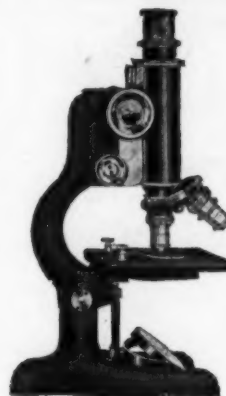
when he sees the minute ob-
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SCHOOL BUILDINGS AND BUSINESS.

(Continued from Page 59)

XI. Pupil Capacity of Building:

Grade	Check in squares on left	Normal Attendance	Maximum Expected Capacity
Kindergarten			
1st grade			
2nd grade			
3rd grade			
4th grade			
5th grade			
6th grade			
7th grade			
8th grade			
Ungraded			
9th grade			
10th grade			
11th grade			
12th grade			
TOTAL			

XII. ROOMS AND SPACE ACCOMMODATIONS REQUIRED. Check in the circles on the left the rooms and space accommodations which you wish to have included in the building. Where the room checked will be required to serve two or more of the functions listed below, indicate the fact by placing the number of each of these additional functions in the rectangle opposite this room. Also place the number of the room checked in the rectangle opposite the additional functions to be served. Do not use the check mark on the additional functions; i. e. If one gymnasium is to serve both boys and girls, check in the circle on the left of No. 239. Place 240, the number of the girls' gymnasium, in the space on the right of No. 239. Then write 239 in the space to the right of No. 240.

Rooms or Space Accommodation Required.

ADMINISTRATION.

- Committee or Board of Education.
- 1. Conference Room.
- 2. Private Office.
- 3. Public Office.
- 4. Storage.
- 5. Toilet.
- Superintendent.
- 6. Private Office.
- 7. Clerk's Office.
- 8. Conference Room.
- 9. Public Office.
- 10. Storage.
- 11. Toilet.
- 12. Vault.
- 13. Telephone Booth.
- Principal (Day School).
- 14. Private Office.
- 15. Clerk's Office.
- 16. Conference Room.
- 17. Public Office.
- 18. Storage.
- 19. Toilet.
- 20. Vault.

This list of rooms and space accommodations includes 402 individual rooms or combinations of rooms. Opposite each room is to be entered the number, size and capacity and location by floors and in relation to other rooms.

Principal (Evening School).

- 21. Private Office.
- 22. Clerk's Office.
- 23. Storage.
- Secretary.
- 24. Secretary's Office.
- 25. Bookkeeper's Office.
- 26. Clerk's Office.
- 27. Program Room.
- 28. Toilet.

Special.

- 29. Placement Office.
- 30. Registration Office.
- 31. Parent's Reception Room.
- 32. Toilet.
- 33. Girls' Dean.
- 34. Toilet.

Storage Rooms.

- 35. Textbooks.
- 36. Charts and Documents.
- 37. General Supply.

Health Supervision.

- 38. Dispensary.
- 39. Emergency Room.
- 40. Toilet.
- 41. Matron's Room.
- 42. Toilet.

Classrooms.

- 142. 1st Grade.
- 143. 2nd Grade.
- 144. 3rd Grade.
- 145. 4th Grade.
- 146. 5th Grade.
- 147. 6th Grade.
- 148. 7th Grade.
- 149. 8th Grade.
- 150. Ungraded.

Recitation Rooms.

- 151. Algebra and Geometry.
- 152. Arts and Crafts.
- 153. Store Room.
- 154. Community Civics.
- 155. Deaf, Blind and Crippled.
- 156. Drawing.
- 157. Drawing Freehand.
- 158. Drawing Mechanical.
- 159. Store Room.
- 160. English.
- 161. History.
- 162. Hygiene.
- 163. Language (Other than English).
- 164. Manual Training.
- 165. Store Room.
- 166. Museum.
- 167. Music.

- 168. Chorus.
- 169. Instrumental.
- 170. Locker Room.
- 171. Open Air.
- 172. Penmanship.
- 173. Physiology.
- 174. Science (General).
- 175. Study Rooms.

Biology Laboratory.

- 176. Laboratory Room.
- 177. Demonstration Room.
- 178. Museum.
- 179. Preparation and Instructor's Room.
- 180. Storage.

Botany Laboratory.

- 181. Laboratory Room.
- 182. Conservatories.
- 183. Green Houses.
- 184. Plant Room.
- 185. Store Room.

Basement:

- Excavated entire.....; in part..... Depth below grade..... Damp proof..... Fire proof..... Heating and ventilating rooms separated from rest of basement by masonry walls with automatic closing fire doors..... Ceiling sound proof..... Window area to floor area 1 to 4.....; 1 to 5.....; 1 to 6..... To be used for laboratories.....; shops.....; play rooms.....; storage.....; boiler and fuel rooms.....; List other uses.....

III. SERVICE SYSTEMS.

Heating and Ventilating:

(Code Sections 28 to 60).

13. Type of System:.....
"Direct-mechanical".....
"Indirect-mechanical".....
"Direct-Gravity".....
"Direct-Natural".....
"Furnace-Gravity".....
Describe system or combination of systems:.....
14. Minimum Requirements of Heating Plant:
The requirements for (a) Temperature, (b) Air Supply, (c) Humidity, (d) Space per pupil, (e) Range of variability are here to be given for (1) Class, study and recitation rooms; (2) Laboratories and shops; (3) Gymnasiums and play rooms; (4) Auditoriums; (5) Corridors; (6) Office and (7) Locker rooms and cloak rooms.
15. Special Exhaust Ventilation; for laboratories..... domestic science rooms.....; shops.....; toilet rooms.....; locker rooms.....; moving picture booths.....; other rooms.....
16. Temperature Control:..... (Code Section 46).
17. Recirculation of air:..... (Code Section 46).
Under what conditions.....
Percent of outdoor air to be mixed.....
Fresh air intake..... (Code Section 60).
18. Air washer:..... (Code Section 60).
Type.....
19. Humidifier:..... (Code Section 60).
Type.....



A. A. Guilbert, Architect.

The McKinley School, Racine, Wisconsin

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T-M-B THE Mastic Floor FLOORING

Over 14,000 feet of T-M-B Flooring have been laid in the class rooms and corridors of this fine modern school building.

The great durability and economy of this material, its restful tread, and its sound deadening and sanitary qualities combine to make it a most appropriate and satisfactory floor covering for school requirements.

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FLOOR BRUSHES

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Spring Handle Type



Palmer's Improved Brush Block and Adjustable Handles represent the only advancement that has been made in Floor Brushes for years.

The Improved Block is lighter than old style blocks, and yet more durable and serviceable—the ends do not "beat out" as with round blocks, from knocking against walls and desks.

The Improved Handles are quickly and securely adjusted—from side to side—or endwise for difficult sweeping—without wearing out threads on handle or block.

Handles may be used indefinitely, and need not be bought with each new lot of brushes—resulting in a substantial saving.

Spring Handles prevent "back-tracking," prolong the life of the brush, and insure maximum wear and service.

Palmer Improved Floor Brushes are made in all grades and qualities—a brush for every purpose.

Rigid Handle Type



Palmer's

PALMER CO.

Palmer's

See pages 147 and 151 for description of Palmer Improved Floor and Soap Fixtures, and Can't Spread Blackboard Eraser.

Fire Protection:

20. Protection of vertical openings, doors and windows:

The requirements for (a) Standard fireproof doors, or (b) Smoke resistive doors, or (c) Fire glass in fire resistive frames, (d) Automatic closing or fusible link attachments are to be specified here for (1) Stairs, (2) Elevator shaft, (3) Waste chute, (4) Dumb-waiter, (5) Store rooms, (6) Basement stairs, (7) Shop doors, (8) Laboratory doors, (9) Windows near fire stairs, (10) Openings in proscenium walls, (11) Stage openings, (12) Openings in fire walls.

21. Class of Construction: A....B....C....D....E....

Mixed Construction:

Under this heading are to be specified (a) Fire-resistive construction, or (b) Fire stopped or slow burning construction, or (c) Quick burning construction for the following parts of the building: (1) Basement, (2) Boiler or engine room, (3) Main exit floor, (4) Corridors, (5) Stairs, (6) Store Rooms, (7) Shops, (8) Laboratories, (9) Auditoriums, (10) Classrooms, (11) Offices, (12) Roof, (13) Window casings and frames, (14) Doors.

21. (Continued) Protection of Vertical openings, Doors and Windows:

See No. 20.

22. Maximum fire area permissible. (Code Section 71).

Fire walls: Location of.....

Construction of.....

35. Natural Illumination:

Under this heading the following facts concerning illumination are to be given (a) Is the light to come from the left only? (b) From the left and rear? (c) From the left and right? (d) From overhead? (e) What is the glass area of the floor space? (f) The distance of windows from the front wall? (g) Distance of windows from ceiling for the following types of rooms: (1) Classrooms, (2) Rest rooms, (3) Study halls, (4) Library, (15) Laboratory, (6) Auditorium, (7) Shops, (8) Gymnasium, (9) Dressing Rooms, (10) Toilets, (11) Corridors, (12) Cloak rooms.

36. Provision for Coats and Hats:

Under this heading there is to be a statement concerning (a) Cloak rooms for each grade opening off classroom, (b) Locker rooms or alcoves distributed throughout building, (c) Wardrobes built in classrooms for (1) Kindergarten, (2) Grades 1 to 6, (3) Grades 1 to 8, (4) Grades 7 to 9, (5) Grades 9 to 12.

37. Cloak Rooms (Col. 1 above):

Location: rear.....; front.....; side of room.....

Capacity..... Width..... Openings to classroom: one..... two.....

with doors..... without doors.....

Height of hooks: Grade 1 to 3..... in.; 4 to 6..... in.; 6 to 8..... in. 9 to 12..... in.

Ventilation.....

38. Locker Rooms (Col. 2 above):

Location: on each floor.....; main exit floor only.....; basement.....

Boys' and girls' separate..... Lockers..... steel..... wood.....

single tier..... double tier.....

size..... make.....

Total locker capacity..... Capacity of each locker room provided.....

Window area to floor space..... Ventilation.....

Sketch plan and arrangement of lockers:

V—SPECIAL ROOMS.

39. Play Rooms: (No. 275-Form I).

(Code Section 166).

Number of.....; size.....; location.....

floor.....; walls.....; ceiling.....

apparatus to be provided for.....

40. Auditorium (No. 218-Form I):

(Code Sec. 167, §2 ff.)

Capacity: main floor.....; gallery.....

Location..... Exits: Number of.....

position of..... empty hall in..... minutes.

Floor: material..... level.....; ramped.....

terraced..... Aisles: ramped.....

terraced..... Seats: movable.....

fixed..... type.....; number of seats in sections.....

Gallery..... construction.....

Check room..... Box office..... Moving picture booth.....

Stage..... width..... depth.....

MR. BECKERT BECOMES PRESIDENT.

William F. Beckert has been elected president and general manager of Newson & Company, publishers of New York to succeed Ever-



FRANK A. FITZPATRICK,
Died, March 17, 1922.

ett Yeaw, who died some months ago. Mr. Beckert comes to his new post of service with years of training and knowledge in the publishing business.

Directly after graduating from Grammar School No. 43, Manhattan, New York, then under the principalship of Elijah A. Howland, Mr. Beckert entered the office of Clark and Maynard.

Since then he has held executive positions with the respective successors of that organization, including the Charles E. Merrill Co., of which he became a Director following the retirement of Mr. Everett Yeaw, late President of Newson & Company, with whom he had been associated for forty years. Mr. Beckert became identified with Newson & Company in the spring of 1913.

He has devoted his life to the schoolbook publishing industry, whose achievements and traditions, he believes, are a fundamental part of the nation's progress. "For many years," Mr. Beckert says, "I have held that the schoolbook publishing industry, while limited in scope as compared with many other industries, is second to none in forwarding civilization. Furthermore, if we stress the spiritual values in education, if we realize that our industry is indispensable in fostering through education a higher and a more enlightened democracy, then and then only can we fully appreciate the service we shall be able to render in this and other countries."

William F. Beckert was born at Dobbs Ferry, N. Y., and subsequently attended the public schools at Tarrytown, Clifton, L. I., Huntington, L. I., and New York City.

FRANK A. FITZPATRICK DEAD.

Frank A. Fitzpatrick, who was for many years the New England manager for the American Book Co., died March 17, 1922, at Boston. Fitzpatrick was a product of the West. He completed his education at the University of Kansas and served as superintendent at Kansas City, Mo., Omaha, Neb., and Leavenworth, Kan.

He was for many years an important factor in the educational field. His progressive and aggressive spirit, together with a whole-souled personality, rendered him a popular figure in the circles in which he moved.

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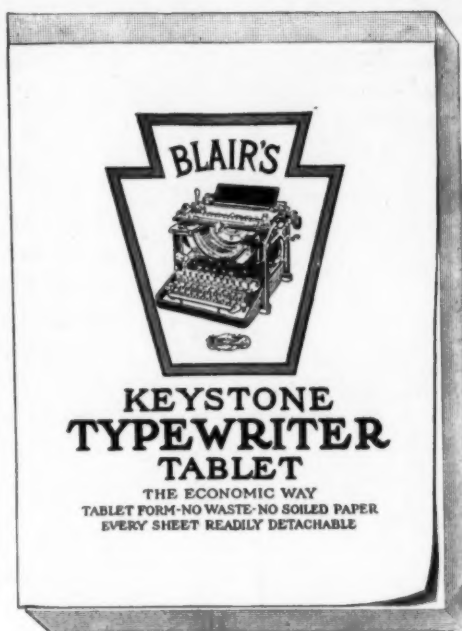
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If Typewriting is a subject in your school, investigation of the many advantages of paper in tablet form will prove very interesting.

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Huntingdon, Pennsylvania.

New Books

Advanced Typewriting and Office Training.

By Meyer E. Zinman. Paper, 156 pages. Second Edition. Revised and Enlarged. Isaac Pitman & Sons, New York, N. Y.

This is a handy instruction book for stenographers. It provides lessons in commercial correspondence, business and legal forms. It also deals with practical office labors such as filing, duplicating, addressing envelopes, bill making, tabulating, etc. The typewriter, its use and care, is described.

The Work of the Stock Exchange.

By J. Edward Meeker. Cloth, 633 pages, illustrated. The Ronald Press Co., New York, N. Y. Price \$5.00.

To the average man the New York stock exchange stands as a mysterious institution whose personnel, ideals, bargains and devices in the making and unmaking of fortunes. The institution, however, performs a distinctive and important function in the economic life of the nation, and the author has sought to demonstrate this fact.

A study is presented in securities, their purpose and service and the relation that a stock exchange bears to them. An intimate view is then given into the operations of the exchange, the manner of trading, the dangers and benefits of stock speculation, organized markets and their economic functions.

The author finally discusses with considerable thoroughness the relation of the stock exchange to American business and as an international market.

The Forest Products Laboratory.

A Decennial Record 1910-1920. Cloth, 196 pages, Price \$1.75. Decennial Committee, Forest Products Laboratory, Madison, Wis.

This volume, which is handsomely bound and illustrated, marks a public service unique in the forest history of the world. Ten years ago the

United States government established the forest product laboratory as an aid to a better knowledge and utilization of wood.

The opening chapters deal with wood in its relation to human progress and the early perspectives of forest utilization, followed by a record of the laboratory, its purpose, plan of operation and service.

The illustrations show devices for testing wood, glue spreading machines, wood distillation retorts, forest service improvements in turpentine, dry kilns, etc., etc. The book also informs those engaged in forestry undertakings how they may avail themselves of the services of the laboratory.

The Johns Hopkins University Studies in Education.

Edited by Edward F. Buchner. The effect of the Physical Make-up of a Book Upon Children's Selection, by Florence Eilau Bamberger. Paper, 162 pages. Price \$2.00. The Johns Hopkins Press, Baltimore, Md.

Here we have an exhaustive study on the phases of book production as seen from the standpoint of the child mind. The author proceeds from the thought that too little attention is paid to the form and appearance of books provided for children. An interesting text in sombre clothing will be overlooked while the same text in a bright garment "starts out on a career of popularity."

As stated, the studies are most exhaustive, and engage in elaborate tables in which the results of numerous experiments are presented. The physical characteristics of preferred books are minutely described.

Those engaged in the production of juvenile books will find this study most suggestive and helpful.

Otis Self-Administering Tests of Mental Ability.

Devised and standardized by Arthur S. Otis. Form A and Form B. The test is a 4-page folder, 8½ x 11 inches. Price per package of 25 examination booklets, 1 Directions and Key, and 1 Record Sheet, \$1.00 net. World Book Company, Yonkers-on-Hudson, N. Y.

This is the era of tests. Nothing has entered the school field in recent years which is more promising of results and more likely to remain permanently than the acceptance of mental tests.

The several test sheets here presented by the publisher deal with self-administering tests

of mental ability in higher examinations. The tests are designated as "self-administrative" in that the examiner has but few initial directions to give after which the students may proceed without interruption. The questions are supplied together with blanks for the answers.

It is claimed that the test can be given within a time limit of either twenty or thirty minutes and that a practical scorer can score a paper in about forty-five seconds with little danger of error.

Minimum Course in Rhetoric.

By Henry C. Edgar. Cloth, 450 pages. The Century Company, New York, N. Y.

This book is based upon the principle that English can be effectively taught only when theory is presented as a guide to practice, so that the student may habitually and naturally write and speak effectively and correctly. The minimum theory is presented in less than 90 pages and the balance of the work consists of extensive carefully graded exercises that will illustrate the several principles, afford ample practice, and suggest interesting topics for themes. The material supplied is so ample that the teacher will find her or his labors reduced to a minimum. For the teacher who believes in a more extended study of theory the book will be a mine of illustrative material.

School Gardening.

A. B. Stout, New York Botanical Garden. Cloth, octavo, xvi and 354 pages. Price, \$1.60. The World Book Co., Yonkers, N. Y., and Chicago, Ill.

This is an elementary text for children in the grades and takes up in a comprehensive way "the science and art of vegetable growing." It is divided into two parts, the first devoted to the important facts and principles of growth and reproduction in garden plants, and the second to the various garden crops and the practical work of growing them. The arrangement permits of simultaneous development of theoretical study and practical work so that the child may apply in the garden what he has read and studied in class and understand the reasons for what he does in planting, hoeing, weeding, watering, fertilizing, etc. Among the special features of the book are chapters on seed growing and plant breeding, on home storage of vegetables, on objectives and methods of teaching gardening.

THE FIELD READERS

This new series of readers, by Walter Taylor Field, contains an abundance of entirely new material charmingly illustrated—just the sort that will stimulate the child's desire to learn to read. These readers are an excellent basal series.

THE FIELD PRIMER

THE FIELD FIRST READER

THE FIELD SECOND READER (*Nearly Ready*)

THE FIELD PHONETIC CHART to accompany PRIMER and FIRST READER (*Just Published*)

THE FIELD AND FARMER TEACHERS' MANUAL (*In Press*)

Word cards, word-group cards, phonetic flash cards, and similar material are in preparation.

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These books present the latest available geographical information and are accurate in every particular regarding scientific fact. The organization of material, the problem method of presentation, and the general pedagogy of the subject are the results of life work on the part of the authors—both recognized teachers—and twenty years' experience in successful geography making on the part of the publishers.

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THE MACMILLAN COMPANY

New York	Atlanta	San Francisco
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The author has a most interesting style of presenting facts and methods, and while he is always accurate in statement and quite technical in language, he maintains a simplicity and directness that brings everything within the grasp of children. His illustrations are unusually fine.

As a text for junior high school grades in schools where agriculture and gardening are prevocational or vocational subjects, the book appeals to us very strongly.

Being Good to Bears and Other True Animal Stories.

Enos A. Mills. 85 pages. \$0.48. Houghton Mifflin Co., Boston.

This little book consists of five delightful short stories of animals intended for the ready grasp of children. It represents the experiences of the author with animals in the mountain camp and is told in story form, in simple language.

The first story is about Johnny and Jenny, two grizzly cubs, who grew up under training and finally were turned over to a city zoo. The second one tells of an experience in a mountain blizzard where the author and his dog Scotch had hair-raising adventures on a slippery mountainside. The third story deals with a pair of chipmunks who made their home in the yard and who became very tame. The fourth tells of experiences with a beaver colony, watching them build their homes, obtain food and perform other interesting tasks. The final story tells of experiences with mountain sheep in Colorado, their sureness and fleetness of foot, their fright at the approach of strangers and the ease with which they are tamed by settlers of the vicinity.

The stories should prove of peculiar interest to children, making them familiar with the habits and modes of life of these animals of the wood and forest.

Thurstone Vocational Guidance Tests.

Arithmetic, algebra, geometry, physics and technical information tests, each four pages 8½ x 11 inches, Price \$1, net. Manual of Directions, 24 pages, Price, \$0.20, net. World Book Co., Yonkers, N. Y., Chicago, Ill.

These tests are intended for candidates for entry into engineering colleges and aim to determine the fitness of high school graduates for

undertaking successfully the fundamental studies embraced in engineering courses. When used in connection with the author's psychological examination, they constitute the first approach to predictive criteria of the general intelligence, aptitude, technical information and all-around interest in the engineering profession of candidates for college engineering courses. The arithmetic test includes problems which are comparatively simple in the calculations involved and decidedly practical in the mechanical and practical knowledge required. The same is true of the physics test. The algebra and geometry tests bring out the student's understanding of mathematical relations and theories. The technical test is purely informational and seeks to determine the student's reading and experience, his observation and his receptivity as based upon the construction of toys and simple mechanical devices, experiments with mechanical and electrical appliances, tinkering automobiles and machines of home use, etc. The tests have been given to about 8,000 engineering students in 43 colleges.

PUBLICATIONS.

Salary Schedules for 1920-1921 in Cities of the United States of 100,000 Population or Over. Compiled and arranged by Dr. E. G. Kimball, Supervising Principal, and Mr. Allan Davis, Principal of the Business High School, Washington, D. C. Bulletin No. 19, January, 1922, National Education Association, Washington. The pamphlet gives the salaries for grade, junior high school and senior high school teachers, principals of both elementary and high schools, directors of special subjects, nurses, heads of departments, assistant superintendents and superintendents of schools.

The Enid Plan of Classification of Pupils According to Mental Ability. By E. D. Price. Published by the board of education, Enid, Okla. Early in the school year of 1918-19 the superintendent called the attention of the teaching staff to the necessity of classifying pupils by some better method than that of having all those of a grade attempting to do identical work. A tentative plan was prepared by the superintendent, tables and charts were made and the teachers

were given instructions in the principles of mental testing and the ways in which results may be made valuable to education. The instruction was carried on throughout that year, 1919-20. By tables and charts, the board also introduced the idea of classification according to intelligence and with but little hesitation, the work of reclassification proceeded. In the school year 1920-21 the teachers of each school, with the principal as leader, were given a course in actual testing. The principal learned to present the tests by studying "mental measurements" and the teachers studied the text diligently and observed the actual testing by the principal. After sufficient instruction, the teachers were permitted to test pupils with the result that they were all fairly proficient. Attention was next given to the three ways of grouping pupils. After the children were grouped and classified, they were tested by means of mental and physical tests to check up on intelligence and to have physical defects removed. At the present time the students have been grouped and placed and each group is proceeding along the line of work laid out. The plan has worked well and has no doubt given desirable results and produced benefits not anticipated at the start.

Survey of the Writing Vocabularies of Public School children in Connecticut. Willard F. Tidyman. Bulletin No. 15, November, 1921. Teachers generally have come to the conclusion that the primary value of spelling is its use in writing, and that the words that the children should memorize in school are the words used commonly in writing. What words are used commonly in writing is a matter of fact, which can be determined by the use of proper statistical methods. The several investigations have revealed the fundamental defects of spelling books and have been instrumental in bringing about a much needed reorganization of spelling material. An important means of progress at the present time will be the development of a reliable and expeditious method of handling words in large numbers.

The report takes up a study of material and method of investigation, use of word lists in teaching, second and third thousand commonest words, grade lists, first thousand commonest words.